

ONTARIO NORTHLAND
TRANSPORTATION COMMISSION

Request for Proposals No. RFP 2024 030

For

New North Bay Locomotive Sand Tower

REPLY BY DATE: 2:00:00 p.m. Friday, August 16, 2024

Primary Contact:

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PART 1
REQUEST FOR PROPOSALS

SECTION 1 - INTRODUCTION

1.1 General

(1) Ontario Northland Transportation Commission (“ONTC”) is issuing this Request for Proposals (“**RFP**”) to obtain proposals from a vendor/service provider(s) for the provision of the goods and/or services described in the RFP Specifications (the “**Goods and/or Services**”).

(2) In this RFP:

“Applicable Laws” means the statutes, regulations, orders, by-laws and other laws of Ontario, Quebec, Manitoba, Canada and any municipal government relevant to the RFP and the subject matter of the RFP;

“Addendum” means the written supplementary information provided to potential Respondents prior to the Submission Deadline, which information becomes part of the RFP Documents;

“Business Day” means any day except Saturday, Sunday or a statutory holiday;

“Final Agreement” means the agreement for the supply of the Goods and/or Services entered into by ONTC and the Successful Respondent;

“Material” means a document or information that must be included in the Proposal including without limitation the information requested in the RFP Data Sheet, and is essential to allow ONTC to evaluate a Proposal and that if not included will result in the disqualification of the Proposal;

“Non-compliant” means the Proposal or the Respondent does not meet a requirement of the RFP Documents;

“Proposal” means the response to the RFP submitted by a Respondent to ONTC;

“Respondent(s)” means the entity submitting a Proposal and includes prospective respondents, whether or not that entity submits a Proposal. If the context requires it, “Respondent” includes any of the Respondent’s respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, or representatives;

“RFP Data Sheet” means the information and requirements contained in Schedule 2-A of Part 2;

“RFP Documents” means the documents listed in RFP Section 2.1 (1) and any additional documents issued through Addenda;

“Short-listed Respondent” means a Respondent selected to proceed to the next step in the evaluation process pursuant to section 6.2 (2) of the RFP;

“Substantially Compliant” means Proposal does not meet the requirements of the RFP Documents; however, the Proposal includes all of the Material items, as identified in the RFP Data Sheet;

“Successful Respondent” means the Respondent selected by ONTC to enter into the Final Agreement.

- (3) The process to select the Short-listed Respondents for the supply of the Goods and/or Services (the “**RFP Process**”) will commence with the issuance of these RFP Documents and will terminate at the earlier of:
- (a) when ONTC and the Successful Respondent execute the Final Agreement; or,
 - (b) upon the termination of the RFP Process in accordance with the terms and conditions of this RFP.

1.2 Ontario Northland Transportation Commission

The Ontario Northland Transportation Commission (ONTC) is an agency of the Province of Ontario that provides reliable and efficient transportation services to northern and rural communities. For over 120 years, the company has provided integrated and impactful transportation services including rail freight, passenger rail, motor coach transportation, rail repair, and remanufacturing services.

ONTC’s rail services are vital in maintaining a reliable supply chain in Northern Ontario by connecting freight customers to global economies. The forestry industry, mining operations, farming communities, and manufacturers count on ONTC’s services to deliver large volumes across vast distances. The company’s 675 miles of mainline track span throughout northeastern Ontario and northwestern Quebec.

ONTC motor coaches connect rural Ontario to major centres providing access to education, medical appointments, shopping, and seamless connections to other transportation providers. The Polar Bear Express passenger train connects Moosonee and Cochrane, Ontario, providing an all-season land link for Indigenous communities on the James Bay Coast.

Improving and repairing transportation equipment is also a large part of ONTC’s service offering. We remanufacture and repair locomotives, passenger rail cars, freight cars, and more. ONTC’s unique mechanical skillset attracts new business and secures skilled trades jobs in Northern Ontario.

ONTC makes provincial dollars reach further by creating innovative solutions that help drive economic growth sustainably, responsibly, and with future generations top of mind. Throughout the agency, modernization is underway with many exciting projects that will improve how we operate. ONTC employs over 900 people including Locomotive Engineers, Motor Coach Operators, skilled tradespeople, and business professionals. Employees work together to improve and deliver services that provide value to the regions served.

SECTION 2 - THE RFP DOCUMENTS

2.1 Request for Proposals Documents

(1) The Request for Proposals documents consist of:

Part 1 – Request for Proposals

Part 2 – Requests for Proposals Summary of Requirements

- (a) Schedule 2-A – RFP Data Sheet
- (b) Schedule 2-B – Participation Registration Form

Part 3 – RFP Specifications

- (a) Schedule 3-A-1 – Scope of Work
- (b) Schedule 3-A-2 – Specifications

Part 4 – Form of Proposal

- (a) Proposal Form 1 – Proposal Submission Form
- (b) Proposal Form 2 – Respondent's General Information
- (c) Proposal Form 3 – Acknowledgment to Comply with Part 3 – Request for Proposals Specifications
- (d) Proposal Form 4 – References
- (e) Proposal Form 5 – Compliance with Contract Documents
- (f) Proposal Form 6 – Respondents' Meeting Registration Form
- (g) Proposal Form 7 – Health, Safety and Environment
- (h) Proposal Form 8 – Schedule of Materials
- (i) Proposal Form 9 – List of Equipment
- (j) Proposal Form 10 – Schedule and Proposed Approach
- (k) Proposal Form 11 – List of Personnel and Resumes
- (l) Proposal Form 12 – Contractors Prequalification Statement
- (m) Proposal Form 13 – Claims

Part 5 – CCDC 2 – 2020 Ontario Northland's Supplementary Conditions and Special Supplementary Conditions

(2) The RFP Documents shall be read as a whole. The Schedules and Addenda, if any, constitute an integral part of this RFP and are incorporated by reference.

(3) Each Respondent shall verify the RFP Documents for completeness upon receipt and shall inform the Contact Person (identified in RFP Section 3.2(7)), immediately:

- (a) should any documents be missing or incomplete; or,
- (b) upon finding any discrepancies or omissions.

- (4) Complete sets of the RFP Documents are available at our company website at www.ontarionorthland.ca and MERX.
- (5) The RFP Documents are made available only for the purpose of Respondents submitting Proposals. Availability and/or use of the RFP Documents do not confer a license or grant for any other purpose.

2.2 Priority of Documents

- (1) If there are any inconsistencies between the terms, conditions or other provisions of the RFP Documents, the order of priority of RFP Documents, from highest to lowest, shall be:
 - (a) Any Addenda modifying the RFP Documents issued during the RFP Process;
 - (b) The RFP Data Sheet;
 - (c) Part 1 – Request for Proposals;
 - (d) Part 3 – Specifications; and,
 - (e) Any other RFP Documents.

2.3 Distribution of Documents – Electronic Distribution

- (1) ONTC will use an online electronic distribution system to distribute all RFP Documents.
- (2) Each Respondent is solely responsible for making appropriate arrangements to receive and access the RFP Documents through that electronic distribution system.

2.4 Information Provided by ONTC

- (1) Each Respondent is solely responsible for conducting its own independent research, due diligence, and any other work or investigations and seeking any other independent advice necessary for the preparation of its Proposal, negotiation or finalization of the Final Agreement and the subsequent delivery of all the Goods and/or Services to be provided by the Successful Respondent. Nothing in the RFP Documents is intended to relieve the Respondents from forming their own opinions and conclusions with respect to the matters addressed in this RFP.
- (2) No guarantee, representation or warranty, express or implied, is made and no responsibility of any kind is accepted by ONTC or its representatives for the completeness or accuracy of any information presented in the RFP Documents, if any, during the RFP Process or during the term of the Final Agreement. By submitting a Proposal, each Respondent agrees that ONTC and its representatives shall not be liable to any person or entity as a result of the use of any information contained in the RFP Documents or otherwise provided by ONTC or its representatives during the RFP Process or during the term of the Final Agreement.

SECTION 3 – THE RFP PROCESS

3.1 RFP Process

- (1) The deadline for the submission of Proposals (the “**Submission Deadline**”) is set out in the RFP Data Sheet.
- (2) ONTC may amend, extend or shorten any of the dates and/or times prescribed in this RFP, at any time, at its sole discretion, including without limitation the Submission Deadline. If ONTC extends the Submission Deadline, all requirements applicable to Respondents will thereafter be subject to the new, extended Submission Deadline.

3.2 Questions and Communications Related to the RFP Documents

- (1) Respondents shall submit all questions, requests for clarifications, and other communications regarding the RFP Documents and the RFP Process by email to the Contact Person set out in section 3.2(7) no later than four (4) full Business Days before the Submission Deadline.
- (2) ONTC will endeavor to provide the Respondents with written responses to questions that are submitted in accordance with this RFP Section 3.2, by no later than two (2) full Business Days before the Submission Deadline. Responses to any questions or requests for clarifications, will be collected and distributed with answers to be delivered to all Respondents who have submitted the Participation Registration Form by way of emailed addenda from ONTC in accordance with the timeline set out in this Section 3.2(2).
- (3) The responses to questions form part of the RFP Documents.
- (4) ONTC may, in its sole discretion:
 - (a) answer questions that ONTC deems to be similar from various Respondents only once;
 - (b) edit any question(s) for the purpose of clarity;
 - (c) respond to questions submitted after the deadline for submission of questions if ONTC believes that such responses would be of assistance to the Respondents generally; and,
 - (d) exclude any questions that, in the sole opinion of ONTC, are ambiguous, incomprehensible, or are deemed by ONTC to be immaterial to the RFP Process, the RFP Documents, or the Goods and/or Services.
- (5) If Respondents find discrepancies, omissions, errors, departures from laws, by-laws, codes or good practice, or information considered to be ambiguous or conflicting, they shall bring them to the attention of the Contact Person in writing, and not less than four

- (4) full Business Days before the Submission Deadline, so that ONTC may, if ONTC deems it necessary, issue instructions, clarifications or amendments by addendum to all Respondents prior to the Submission Deadline. ONTC will endeavor to, but is not required to, issue such Addenda at least two (2) full Business Days prior to the Submission Deadline. It is each Respondent's responsibility to seek clarification from ONTC of any matter it considers to be unclear in the RFP Documents or the description of the Goods and/or Services and the Respondent may seek clarification in accordance with this Section 3.2. Neither ONTC nor the Government of Ontario shall be responsible for any misunderstanding by a Respondent of the RFP Documents, the RFP Process or the Goods and/or Services.
- (6) If ONTC gives oral answers to questions at any meeting (Section 3.4), these answers will not be considered final, and may not be relied upon by any of the Respondents, unless and until such answers are provided by way of an addendum in accordance with this Section 3.2.
- (7) The Contact Person designated by ONTC for this RFP is **Brinda Ranpura, Procurement Contracts Specialist, 555 Oak Street East, North Bay, Ontario P1B 8L3 (705) 472-4500 ext. 548, brinda.ranpura@ontarionorthland.ca** (the "Contact Person"). The above Contact Person is the sole contact for this RFP. A Respondent may be disqualified where contact is made with any person other than the Contact Person.
- (8) ONTC will not be responsible for statements, instructions, clarifications, notices or amendments communicated orally by ONTC to one or more of the Respondents. Statements, instructions, clarifications, notices or amendments by ONTC, which affect the RFP Documents, may only be made by addendum.

3.3 Addenda/Changes to the RFP Documents

- (1) ONTC may, in its sole discretion, amend, supplement, or change the RFP Documents prior to the Submission Deadline. ONTC shall issue amendments, supplements, or changes to the RFP Documents by Addendum only. No other statement or response(s) to questions, whether oral or written, made by ONTC or any ONTC advisors, employees or representatives, including, for clarity, the Contact Person, or any other person, shall amend, supplement or change the RFP Documents. Addenda will be distributed in the same manner as the RFP and shall become part of the RFP Documents.
- (2) Each Respondent is solely responsible for ensuring that it has received all Addenda issued by ONTC. Respondents may, in writing by email to the Contact Person, seek confirmation of the number of Addenda, issued under this RFP.

3.4 Respondents' Meeting

- (1) To assist Respondents in understanding the RFP Documents, and the RFP Process, ONTC may conduct an information meeting (the "**Respondents' Meeting**") for all Respondents. Whether or not ONTC will conduct a Respondents' Meeting is set out in the

RFP Data Sheet. If ONTC is conducting a Respondents' Meeting, the meeting will be held on the date and at the time and location set out in the RFP Data Sheet.

- (2) Attendance by Respondents at a Respondents' Meeting may not be mandatory but, if one is held, Respondents are strongly encouraged to attend. Whether or not the Respondents' Meeting is mandatory will be identified on the RFP Data Sheet. When a Respondents' meeting is mandatory, all attending persons or entities will be required to sign the "Site Meeting Log" to confirm their attendance and provide a valid email address for purpose of receiving information.
- (3) If ONTC gives oral answers to questions at the Respondents' Meeting, these answers will not be considered final, and may not be relied upon by any of the Respondents, unless and until such answers are provided by way of an Addendum in accordance with Section 3.2.
- (4) If pre-registration for the Respondents' Meeting is necessary, the deadline for registration will be set out in the RFP Data Sheet and details regarding the registration process will be set out in the RFP Data Sheet.

3.5 Prohibited Contacts

- (1) Respondents and their respective advisors, employees and representatives are prohibited from engaging in any form of political or other lobbying, of any kind whatsoever, to influence the outcome of the RFP Process.
- (2) Without limiting the generality of Section 3.5(1) above, neither Respondents nor any of their respective advisors, employees or representatives shall contact or attempt to contact, either directly or indirectly, at any time during the RFP Process, any of the following persons or organizations on matters related to the RFP Process, the RFP Documents, or their Proposals:
 - (a) any member of the Evaluation Team (as defined in Section 6.1), except the Contact Person;
 - (b) any advisor to ONTC or the Evaluation Team, except the Contact Person; or,
 - (c) any directors, officers, employees, agents, representatives or consultants of:
 - (i) ONTC, except the Contact Person;
 - (ii) Ontario Ministry of Transportation;
 - (iii) The Premier of Ontario's office or the Ontario Cabinet office;
 - (iv) A Member of Provincial Parliament (including the Premier); or,
 - (v) Any other person or entity listed in the RFP Data Sheet.
- (3) If a Respondent or any of their respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent; in the

opinion of ONTC, contravenes RFP Section 3.5(1) or 3.5(2), ONTC may, but is not obliged to, in its sole discretion:

- (a) take any action in accordance with RFP Section 7.2; or
- (b) impose conditions on the Respondent's continued participation in the RFP Process that ONTC considers, in its sole discretion, to be appropriate.

3.6 Media Releases, Public Disclosures, Public Announcements and Copyright

- (1) A Respondent shall not, and shall ensure that its shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent do not, issue or disseminate any media release, social media or Internet post, public announcement or public disclosure (whether for publication in the press, on the radio, television, internet or any other medium) that relates to the RFP Process, the RFP Documents or the Goods and/or Services or any matters related thereto, without the prior written consent of ONTC.
- (2) Neither the Respondents or any of their respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent shall make any public comment, respond to questions in a public forum, or carry out any activities to either criticize another Respondent or Proposal or to publicly promote or advertise their own qualifications, interest in or participation in the RFP Process without ONTC's prior written consent, which consent may be withheld, conditioned or delayed in ONTC's sole discretion. Respondents, and their respective advisors, employees and representatives are permitted to state publicly that they are participating in the RFP Process but shall not publicly identify other Respondents without the prior written consent of ONTC.
- (3) Respondents shall not use the name of ONTC or any of ONTC's logos, designs, colours or registered trademarks and names used, owned or registered by ONTC, during the RFP Process, if selected as the Successful Respondent, or at any time prior to, during, or following the supply of the Goods and/or Services, except with the prior written consent of ONTC.

3.7 Confidentiality and Disclosure Issues – Respondent Information

- (1) Respondents are advised that ONTC may be required to disclose the RFP Documents, any other documentation related to the RFP Process and a part or parts of any Proposal pursuant to the *Freedom of Information and Protection of Privacy Act* (Ontario) ("FIPPA"). Respondents are also advised that FIPPA does provide protection for confidential and proprietary business information. Respondents are strongly advised to consult their own legal advisors as to the appropriate way in which confidential or proprietary business information should be marked as such in their Proposals. Subject to the provisions of FIPPA, ONTC will use reasonable commercial efforts to safeguard the confidentiality of

any information identified by the Respondent as confidential but shall not be liable in any way whatsoever to any Respondent if such information is disclosed based on an order or decision of the Information and Privacy Commissioner or otherwise as required under the Applicable Laws.

- (2) The Respondent agrees that ONTC may disclose Proposals, and all information submitted in or related to the Proposals, to the Government of Ontario.
- (3) ONTC may provide the Proposals to any person involved in the review and/or evaluation of the Proposals on behalf of ONTC and ONTC may:
 - (a) make copies of the Proposal; and/or,
 - (b) retain the Proposal.
- (4) ONTC may disclose any information with respect to the Respondents, the Proposals and the RFP Process as required by the Applicable Laws.
- (5) The Respondent shall not require ONTC or any of its representatives to sign a non-disclosure agreement in respect of any step taken or information provided as part of this RFP Process, provided that if the nature of the subject matter of the RFP is such that, in the opinion of ONTC, it would be appropriate to enter into a non-disclosure agreement with a Respondent or Respondents, ONTC and/or the Respondent shall enter into such agreement in a form and with the content satisfactory to ONTC.

3.8 Confidential Information

- (1) In this RFP, “**RFP Information**” shall mean all material, data, information or any item in any form, whether oral or written, including in electronic or hard-copy format, supplied by, obtained from or otherwise procured in any way, whether before or after the RFP Process, from ONTC or any Ministry or Agency of the Government of Ontario, in connection with the RFP Documents or the Goods and/or Services excluding any item which:
 - (a) is or becomes generally available to the public other than as a result of a disclosure resulting from a breach of this RFP Section 3.8;
 - (b) becomes available to the Respondent on a non-confidential basis from a source other than ONTC, so long as that source is not bound by a non-disclosure agreement with respect to the information or otherwise prohibited from transmitting the information to the Respondent by a contractual, legal or fiduciary obligation; or,
 - (c) The Respondent is able to demonstrate was known to it on a non-confidential basis before it was disclosed to the Respondent by ONTC.
- (2) RFP Information:

- (a) shall remain the sole property of ONTC or the Government of Ontario, as applicable, and the Respondent shall maintain the confidentiality of such information except as required by law;
 - (b) shall not be used by the Respondent for any other purpose other than submitting a Proposal or performing obligations under any subsequent agreement with ONTC relating to the Goods and/or Services;
 - (c) shall not be disclosed by the Respondent to any person who is not involved in the Respondent's preparation of its Proposal or in the performance of any subsequent agreement relating to ONTC, or the Government of Ontario, as applicable, without prior written authorization from ONTC;
 - (d) shall not be used in any way detrimental to ONTC or the Government of Ontario; and,
 - (e) if requested by ONTC, shall be returned to the Contact Person or destroyed by the Respondent no later than ten (10) calendar days after such request is received in writing by the Respondent.
- (3) Each Respondent shall be responsible for any breach of the provisions of this RFP Section 3.8 by any person to whom it discloses the RFP Information.
- (4) Each Respondent or Short-listed Respondent acknowledges and agrees that a breach of the provisions of this RFP Section 3.8 would cause ONTC, the Government of Ontario and/or their related entities to suffer loss which could not be adequately compensated by damages, and that ONTC, the Government of Ontario and/or any related entity may, in addition to any other remedy or relief, enforce any of the provisions of this RFP Section 3.8 upon application to a court of competent jurisdiction without proof of actual damage to ONTC, the Government of Ontario or any related entity.
- (5) Notwithstanding RFP Section 9.3, the provisions of this RFP Section 3.8 shall be binding and shall survive any cancellation or termination of this RFP and the conclusion of the RFP Process.
- (6) ONTC may, in its sole discretion, require that Respondents execute a legally binding non-disclosure agreement in a form and substance satisfactory to ONTC prior to receiving the RFP Information.

3.9 Governing Laws and Attornment

- (1) This RFP Process and the Final Agreement entered into pursuant to this RFP Process shall be governed and construed in accordance with the laws of Ontario, the laws of Quebec, the laws of Manitoba, if relevant to the subject matter of this RFP, and the applicable laws of Canada, excluding any conflict of laws principles.

- (2) Each Respondent agrees that the courts of the Province of Ontario shall have exclusive jurisdiction to entertain any action or proceeding based on, relating to or arising from this RFP process.

3.10 Licenses and Permits

- (1) If a Respondent is required by the Applicable Laws to hold or obtain a license, permit, consent or authorization to carry on an activity contemplated in its Proposal, neither acceptance of the Proposal nor execution of the Final Agreement shall be considered to be approval by ONTC of carrying on such activity without the requisite license, permit, consent or authorization.

3.11 Respondents' Costs

- (1) The Respondent shall bear all costs and expenses incurred by the Respondent relating to any aspect of its participation in this RFP Process, including, without limitation, all costs and expenses related to the Respondent's involvement in:
 - (a) the preparation, presentation and submission of its Proposal;
 - (b) due diligence and information gathering processes;
 - (c) attendance at any Respondents' Meeting(s) or presentations;
 - (d) preparation of responses to questions or requests for clarification from ONTC;
 - (e) preparation of the Respondent's own questions during the clarification process;
 - (f) preparation of prototypes, proof of concept and/or demonstrations; and,
 - (g) any discussions or negotiations with ONTC regarding the Final Agreement.
- (2) Without limiting the generality of Section 9.1(2) of this RFP, in no event shall ONTC or the Government of Ontario be liable to pay any costs or expenses or to reimburse or compensate a Respondent under any circumstances for the costs or expenses set out in Section 3.11(1), regardless of the conduct or outcome of the RFP Process.

3.12 Delay and Costs of Delay

- (1) By submitting a Proposal, the Respondent waives all claims against ONTC and the Government of Ontario including any claims arising from any error or omission in any part of the RFP Documents or RFP Information or any delay, or costs associated with delays, in the RFP Process.

3.13 Clarification and Verification of Respondent's Proposal

- (1) Following submission of a Proposal, ONTC may:
 - (a) request a Respondent to clarify or verify the contents of its Proposal, including by submitting supplementary documents; and/or,
 - (b) request a Respondent to confirm an ONTC interpretation of the Respondent's Proposal.
- (2) Any information received by ONTC from a Respondent pursuant to a request for clarification or verification from ONTC as part of the RFP Process may, in ONTC's discretion, be considered as an integral part of the Proposal even if such information should have been submitted as part of the Respondent's Proposal and may, in ONTC's discretion, be considered in the evaluation of the Respondent's Proposal.
- (3) ONTC may, in its sole discretion, verify or clarify any statement or claim contained in any Proposal or made subsequently in any interview, presentation, or discussion. That verification or clarification may be made by whatever means that ONTC deems appropriate which may include contacting the persons identified in the contact information provided by the Respondent and contacting persons or entities other than those identified by any Respondent.
- (4) By submitting a Proposal, the Respondent is deemed to consent to ONTC verifying or clarifying any information and requesting additional information from third parties regarding the Respondent) and its directors, officers, shareholders or owners and any other person associated with the Respondent as ONTC may determine is appropriate.
- (5) ONTC is not obliged to seek clarification or verification of any aspect of a Proposal, or any statement or claim made by a Respondent.
- (6) Requests for clarifications shall not be construed as acceptance by ONTC of a Proposal.

3.14 Two-Envelope Process

- (1) ONTC may elect to complete a Two-Envelope Process. Whether Respondents will be required to submit their Proposals using a Two-Envelope Process will be identified on the RFP Data Sheet.
- (2) If ONTC elects to complete a Two-Envelope Process, the Proposal shall be broken down into two components; a technical submission and a financial submission.
- (3) If ONTC elects to complete a Two-Envelope Process, ONTC will identify a minimum score that must be attained on the technical submission on the RFP Data Sheet. Proposals that do not meet the minimum score for the technical submission following evaluation of the technical submission, will not proceed further in the evaluation process, provided that ONTC may, in its sole discretion, based on the overall scores of all the technical

submissions, revise the minimum score required to proceed further in the evaluation process. Financial submissions will only be opened and evaluated for the Proposals that meet the minimum score for the technical submission.

SECTION 4 - PROPOSAL CONTENT AND FORMAT

4.1 Format and Content of Proposal

- (1) Respondents shall submit their Proposal in one envelope or, if submitting electronically, one electronic folder. Where required by the RFP Data Sheet to follow the two-envelope process, Respondents shall submit the technical submission and the financial submission in two separate envelopes or, if submitting electronically, two separate electronic folders.
- (2) Unless otherwise specified in the RFP Data Sheet, Respondents shall not submit pre-printed literature with their Proposals. Any unsolicited pre-printed literature submitted as part of a Proposal will not be reviewed by the Evaluation Team.
- (3) Each Respondent will:
 - (a) in a clear, concise and legible manner, complete and submit all documentation and information required by Part 2, Part 3, and Part 4 to the RFP;
 - (b) for a hard copy submission, complete any handwritten portions of the proposal forms in ink;
 - (c) provide all information requested and ensure that an authorized person or persons sign all forms where indicated. Failure to provide all requested information on the proposal forms and failure to fill in all blank spaces may result in a Proposal being determined to be non-compliant; and,
 - (d) use only the proposal forms issued as part of the RFP documents unless otherwise indicated.
- (4) Information provided by Respondents on hard copy proposal forms may be amended prior to the Proposal submission, provided the amendments are initialed by an authorized representative of the Respondent. Un-initialed pre-submission amendments may result in the Proposal being declared non-compliant.
- (5) Proposals that are not originals (if hard copy), are unsigned, improperly signed, incomplete, conditional or illegible, may be declared non-compliant.
- (6) The Harmonized Sales Tax (HST) shall not be included in the price. Any taxes or increases to taxes announced prior to the date of the issuance of the RFP Documents and scheduled to come into effect subsequent to it shall be taken into consideration at time of invoicing.
- (7) Price:

- (a) Price shall be an all-inclusive lump sum price (excluding HST), unless otherwise indicated in the RFP Documents; and,
- (b) Where the RFP requires the Respondent to provide a breakdown of the price in Proposal Form 1-A, the price as stated in Proposal Form 1 shall govern in the case of conflict or ambiguity between the price and the sum of the breakdown of the price.

(8) Listing of Subcontractors

Each Respondent shall complete the “Subcontractors” section of Proposal Form 2 – Respondent’s General Information, naming the Subcontractors which the Respondent will employ to perform an item of the work called for by the RFP Documents. Failure of the Respondent to list Subcontractors where required, may result in the Proposal being declared non-compliant.

4.2 Proposal Submission Form

- (1) Each Respondent will complete and submit the forms included in Part 4 – Form of Proposal. Failure of the Respondent to complete and submit one or more of the forms included in Part 4 – Form of Proposal, may result in the Proposal being declared non-compliant.
- (2) Respondents shall execute the Proposal Submission Form as follows:
 - (a) in the case of a sole proprietorship, the sole proprietor will sign the Proposal Submission Form and have the signature witnessed;
 - (b) in the case of a corporation, an authorized signing officer will sign the Proposal Submission Form; or,
 - (c) in the case of a partnership, a partner or partners authorized to bind the partnership will sign the Proposal Submission Form and have their signatures witnessed.

4.3 Bid Performance Security

- (1) The Respondent shall provide with its Proposal, Bid Performance Security in one of the following forms:
 - (a) Irrevocable stand-by Letter of Credit (“**LOC**”); or,
 - (b) Bid bond(the “**Bid Performance Security**”).

The Bid Performance Security shall be:

- (a) in the Respondent's own name;
- (b) if a bid bond, issued by a surety licensed to conduct surety and insurance business in Ontario;
- (c) in a form satisfactory to ONTC;
- (d) for a term of at least ninety (90) calendar days after the Submission Deadline; and
- (e) in the amount of ten percent (10%) of the total bid price excluding HST.

The Bid Performance Security is for the benefit of ONTC and will be retained by ONTC to compensate ONTC for the damages it will suffer if the Successful Respondent fails to provide the Contract Securities (defined in Section 4.3(2), below) and evidence of insurance and other documents required by this RFP or by the Final Agreement, or fails to execute the Final Agreement within the time required by the RFP Documents.

The Bid Performance Security of the Successful Respondent will be returned after the Successful Respondent delivers to ONTC compliant Contract Securities and evidence of insurance and other documents required by this RFP or by the Final Agreement and the Successful Respondent has executed the Final Agreement, all within the time required by the RFP Documents.

The Bid Performance Security of all other Respondents shall be returned to the Respondents upon the occurrence of the earlier of:

- (a) execution by both parties of the Final Agreement between ONTC and the Successful Respondent;
- (b) the expiry of the 90-day period following the Submission Deadline;
- (c) the cancellation of the RFP process without an award of the contract; or,
- (d) the disqualification of all Proposals.

(2) Agreement to Bond

The Respondent shall provide with its Proposal an agreement to bond issued by a surety company undertaking to provide a fifty percent (50%) Performance Bond and a fifty percent (50%) Labour and Material Bond (the "**Contract Securities**") in the form prescribed by the *Construction Act*, both to be provided to ONTC by the Successful Respondent following award of the contract.

- (3) Proposals not accompanied by the required Bid Performance Security and the required agreement to bond will be declared non-compliant.
- (4) The Respondent shall include the actual cost of all bonds, with no mark-up, in the Proposal price.

4.4 References and Past Performance Issues

- (1) If specified in the RFP Data Sheet, Respondents shall provide reference information. Unless otherwise set out in the RFP Data Sheet, all references shall be, where possible, with respect to similar goods and/or services, as applicable, during the five (5) years immediately prior to the Submission Deadline. Unless otherwise set out in the RFP Data Sheet, the Respondent shall provide a minimum of three (3) references.
- (2) ONTC may, in its sole discretion, confirm the Respondent's experience and ability to provide the Goods and/or Services by contacting the Respondent's references. However, ONTC is under no obligation to contact references submitted by any Respondent. References and information received from references, if contacted, will be taken into account in the evaluation process as identified in the RFP Data Sheet.
- (3) ONTC may take into account in the evaluation process reliable information received from the Government of Ontario or its Agencies regarding past performance of a Respondent, provided information evidencing past poor performance by a Respondent is provided to the Respondent (subject to any restrictions on disclosure imposed by applicable law) and the Respondent is afforded an opportunity to respond to the information.
- (4) If ONTC receives information from referees of a Respondent's past poor performance, ONTC shall advise the Respondent (subject to any restrictions on disclosure imposed by applicable law) and afford the Respondent an opportunity to respond to the information prior to considering this information as part of the evaluation process.

4.5 Conflict of Interest

- (1) For the purposes of this Section 4.5, the term "**Conflict of Interest**" includes, but is not limited to, any situation or circumstance where the interests, conduct, other commitments or relationships of a Respondent, a Respondent's family member or an officer, director or employee of the Respondent could or could be perceived to, directly or indirectly, compromise, impair or be in conflict with the integrity of the RFP Process, the subject matter of the RFP or ONTC.
- (2) Each Respondent shall promptly disclose any potential, perceived or actual Conflict of Interest of the Respondent to the Contact Person in writing. If ONTC discovers a Respondent's failure to disclose a Conflict of Interest, ONTC may, in its sole and absolute discretion disqualify the Respondent or terminate the Final Agreement if such Respondent is the Successful Respondent.
- (3) ONTC may, in its sole discretion, and in addition to any other remedy available at law or in equity:
 - (a) waive any Conflict of Interest;

- (b) impose conditions on a Respondent that require the management, mitigation and/or minimization of the Conflict of Interest; or,
- (c) disqualify the Respondent from the RFP Process if, in the sole and absolute opinion of ONTC, the Conflict of Interest cannot be managed, mitigated or minimized.

SECTION 5 - PROPOSAL SUBMISSION, WITHDRAWAL, MODIFICATION

5.1 Submission of Proposals and Late Proposals

- (1) Each Respondent shall submit their proposal in the format prescribed in the RFP Data Sheet. ONTC will not accept any proposal submission that is not submitted in the format prescribed in the RFP Data Sheet.

ONTC may elect to accept Electronic Bid Submissions, Physical Bid Submissions or a combination of both.

- (a) If ONTC elects to use Electronic Bid Submissions, submissions shall be submitted on, and in accordance with, forms supplied by ONTC. **All responses are to be submitted to ONTC through the use of MERX Electronic Bid Submission (EBS).** Respondents shall be solely responsible for the delivery of their Proposals in the manner and time prescribed in the RFP Data Sheet.

Questions concerning submitting through MERX should be addressed to:

- MERX Customer Support
- Phone 1-800-964-6379
- Email merx@merx.com

Any Proposal from a Respondent whose name does not appear on the official MERX document request list (i.e., who has not downloaded the documents themselves) will be declared invalid, and the Proposal will not be considered.

MERX EBS does not allow submissions to be uploaded after the bid submission deadline; therefore, the Respondent should ensure they allow plenty of time to upload the documents.

Where required by the RFP Data Sheet to use a two-envelope process, Respondents shall include two separate and clearly identifiable attachments: 1) Technical and, 2) Financial. The file names for the technical and financial attachments should be sufficiently distinguishable such that ONTC does not need to open the attachments to differentiate between them.

- (b) If ONTC elects to use Physical Bid Submissions, Respondents shall submit one original and the number of copies of its Proposal (in hard copy) specified in the RFP Data Sheet and the number of electronic copies of its Proposal (on a properly labelled CD or USB key in PDF format) specified in the RFP Data Sheet, at the

correct location for submission and on or before the Submission Deadline. If there is any difference whatsoever between the electronic copy of the Proposal and the original hard copy, the original hard copy of the Proposal, as submitted, will govern. The electronic copy of the Proposal is solely for the convenience of ONTC.

Respondents shall submit their Proposals to the attention of the Senior Manager of Strategic Procurement by prepaid courier or personal delivery at the following address:

Jason Baker
Senior Manager, Strategic Procurement
Ontario Northland Transportation Commission
555 Oak Street East
North Bay, Ontario P1B 8E3

The Respondent shall place their Proposal Submission in a sealed envelope or package with the Respondent's full legal name and return address, the RFP Number, the Submission Deadline and the label "Proposal Submission" clearly displayed on the outside of the envelope.

Where required by the RFP Data Sheet to use a two-envelope process, Respondents shall have one sealed envelope as prescribed above that contains two individual sealed envelopes inside that are clearly marked "Technical Submission" and "Financial Submission".

- (c) For the convenience of the Respondents, and only when identified in the RFP Data Sheet, ONTC may allow either an Electronic Bid Submission through MERX or a Physical Bid Submission. The Respondent shall only use one method and follow the same procedure prescribed above.
- (2) Proposals must be received before the time noted in the RFP Data Sheet.
- (3) Proposals will be date and time stamped at the place receiving the Proposals. Late Proposals will be returned unopened.
- (4) Proposals which are submitted by facsimile transmission, email, or by electronic means other than MERX will NOT be considered.
- (5) Respondents are solely responsible for the method and timing of delivery of their Proposals.
- (6) ONTC reserves the right to make copies of the Respondent's Proposals as it may be required for the purpose of conducting a full evaluation of the Proposal submitted.
- (7) The Respondent should identify and mark any trade secret or proprietary intellectual property in its Proposal.

5.2 Late Proposals

- (1) ONTC will reject Proposals that are received after the Submission Deadline.

5.3 Withdrawal of Proposals

- (1) When submitting a Physical Bid Submission, a Respondent may withdraw its Proposal at any time before the Submission Deadline by notifying the Contact Person in writing. ONTC shall return, unopened, a Proposal that has been withdrawn.
- (2) When submitting an Electronic Bid Submission, MERX will allow withdrawal of Proposals up to the Submission Deadline.

5.4 Amendment of Proposals

- (1) When submitting a Physical Bid Submission, Respondents may amend their Proposals after submission but only if the original Proposal is withdrawn and the amended Proposal is submitted before the Submission Deadline.
- (2) Electronic Bid Submissions through MERX will allow amendments up to the closing date and time; however, **Respondents are responsible for ensuring they allow sufficient time to upload the amended documents.**
- (3) If more than one Proposal is received from the same Respondent before the Submission Deadline, only the last Proposal received before the Submission Deadline will be considered.

5.5 Proposal Irrevocability

- (1) Subject to the Respondent's right to withdraw or amend the Proposal before the Submission Deadline, the Respondent's Proposal is irrevocable and shall remain in effect and open for acceptance for ninety (90) days after the Submission Deadline.

5.6 One Proposal per Person or Entity

- (1) Except as set out in the RFP Data Sheet or with ONTC's approval:
 - (a) a person or entity shall submit or participate in only one Proposal either individually or as a Respondent team member; and,
 - (b) a person or entity shall not be a subcontractor of a Respondent and also submit a Proposal individually or as a Respondent team member in the same RFP Process.

- (2) If a person or entity submits or participates in more than one Proposal in contravention of RFP Section 5.6(1), ONTC may, in its sole discretion, disqualify any or all of the Proposals submitted by that person or entity or in which that person or entity is a participant.

SECTION 6 - PROPOSAL EVALUATION

6.1 Evaluation Team

- (1) ONTC will establish an evaluation team for the purpose of evaluating Proposals (the “**Evaluation Team**”).
- (2) The Evaluation Team may, in its sole discretion, delegate certain administrative functions related to the evaluation of Proposals to a separate team of individuals who are not members of the Evaluation Team, who will be supervised by the Evaluation Team. Without limiting the generality of the foregoing, but for greater particularity, the Evaluation Team may seek the advice and assistance of third-party consultants and the Government of Ontario. Each Respondent acknowledges that the RFP documents may have been prepared with the assistance of a third-party consultant and that the consultant may participate in the evaluation of the Proposals.

6.2 Evaluation of Proposals

- (1) The Respondents’ Proposals will be reviewed and evaluated by the Evaluation Team on the basis of the evaluation criteria set out in the RFP Data Sheet (the “**Evaluation Criteria**”).
- (2) After selection of the Short-listed Respondent(s), ONTC may, in its sole discretion, negotiate changes, amendments or modifications to the Short-listed Respondent’s Proposal or the Final Agreement.
- (3) If ONTC is of the opinion that any of the following apply, then ONTC may, in ONTC’s sole discretion, decline to select that Respondent to be a Short-listed Respondent:
 - (a) a Respondent has submitted a price that is clearly insufficient to perform the supply of Goods and/or Services;
 - (b) a Respondent has previously provided poor performance to ONTC or a subsidiary of ONTC;
 - (c) a Respondent is disqualified from participating in the RFP Process per RFP Section 7.2 (1)(i);
 - (d) ONTC cannot, to ONTC’s satisfaction, prior to the conclusion of the RFP Process, verify independently or through a third party or parties any and/or all information, statements, representations and/or warranties contained in the Proposal;

- (e) a Respondent or any subcontractor of the Respondent is not financially sound, or ONTC is unable to obtain from the Respondent or third-party sources reasonable assurances of the financial position of the Respondent or any of its subcontractors;
- (f) the overall cost to ONTC would be significantly increased with that Respondent;
- (g) the Respondent failed to meet the mandatory requirements specified in the RFP Data Sheet; or,
- (h) the Respondent failed to attain the minimum score required for the Technical Submission, where the RFP Data Sheet called for a two-envelope process.

6.3 Short-Listing

- (1) The Evaluation Team will establish the list of Short-listed Respondents based on the Evaluation Criteria.
- (2) The number of Respondents short-listed is in the sole discretion of ONTC.

6.4 Interviews, Site Visits, Demonstrations and Presentations

- (1) ONTC may, in its sole discretion, conduct interviews, demonstrations, site visits or presentations as part of the evaluation process if set out in the RFP Data Sheet.
- (2) The evaluation of any interviews, demonstrations, site visits or presentations will be conducted in accordance with the process set out in the RFP Data Sheet.
- (3) ONTC may conduct interviews, demonstrations, site visits or presentations with some or all Respondents, or may restrict participation to only the Short-listed Respondent(s).

SECTION 7 - GENERAL EVALUATION AND DISQUALIFICATION PROVISIONS

7.1 ONTC's Discretion

- (1) ONTC may determine, in its sole discretion:
 - (a) the membership of the Evaluation Team;
 - (b) if a Proposal is compliant with the RFP Documents;
 - (c) if a failure to comply is material;
 - (d) if a Proposal or a Respondent is disqualified;
 - (e) the evaluation results and ranking for each Respondent; and,

- (f) which Respondent, if any, and how many Respondents, based on the evaluation process, will be Short-listed Respondents.

7.2 Disqualification

- (1) ONTC may, in its sole discretion, disqualify a Respondent or a Respondent's Proposal or cancel its decision to identify a Respondent as a Short-listed Respondent or a Successful Respondent, at any time prior to the execution of the Final Agreement by ONTC, if:
 - (a) The Respondent fails to cooperate in any attempt by ONTC to clarify or verify any information provided by the Respondent in its Proposal;
 - (b) The Respondent contravenes RFP Section 3.5, RFP Section 3.6 or RFP Section 5.6(2);
 - (c) The Respondent fails to comply with the Applicable Laws;
 - (d) The Proposal contains false or misleading information, or the Respondent provides false or misleading information in any part of the RFP Process;
 - (e) The Proposal, in the sole discretion of ONTC, reveals a Conflict of Interest that cannot be managed, mitigated or minimized;
 - (f) There is evidence that the Respondent colluded with one or more other Respondents in the preparation or submission of Proposals;
 - (g) The Respondent has previously breached or been in default of compliance with any term of any agreement with ONTC and such breach or default has not been waived by ONTC or the Respondent has not cured the default;
 - (h) The Respondent has been convicted of an offence in connection with any services rendered by the Respondent to ONTC, or to any Ministry, Agency, Board or Commission of the Government of Ontario or the Government of Canada;
 - (i) The Respondent, at the time of issuance of this RFP or any time during the RFP Process, has an outstanding claim or is engaged in an ongoing legal dispute with ONTC, other than an adjudication under the Construction Act;
 - (j) The Proposal is not Substantially Compliant;
 - (k) The Respondent has failed to notify ONTC of, or ONTC has not approved, a post-submission change in the control of the Respondent or in the circumstances of the Respondent that may materially negatively impact the Respondent's ability to perform its obligations if selected as the Successful Respondent; and,

- (l) The Respondent has received a Vendor Performance Evaluation as part of ONTC's Vendor Performance Policy, and received a total rating on the Final Performance Form that disqualifies the Respondent from participating in the RFP Process.
- (2) Notwithstanding Section 7.2 (1), ONTC shall retain the right to select as the Successful Respondent, any Respondent(s) which, in ONTC's sole and absolute discretion, has submitted a substantially compliant Proposal(s).

7.3 General Rights of ONTC

- (1) ONTC may, in its sole discretion and at any time during the RFP process:
 - (a) reject any or all of the Proposals;
 - (b) accept any Proposal or any portions of any Proposals for any reason whatsoever;
 - (c) reject any Proposals or any portions of Proposals for any reason whatsoever;
 - (d) if only one Proposal is received, elect to either accept it, reject it, or enter into negotiations with the applicable Respondent;
 - (e) elect not to proceed with, cancel, or terminate the RFP;
 - (f) alter the Submission Deadline or any other deadlines associated with the RFP Process;
 - (g) change the RFP Process or any other aspect of the RFP Documents; or,
 - (h) cancel this RFP Process and subsequently conduct another competitive process for the same Goods and/or Services that are the subject matter of this RFP or subsequently enter into negotiations with any person or persons with respect to the Goods and/or Services that are the subject matter of this RFP.
- (2) If ONTC, in its sole discretion, is of the opinion that all of Proposals submitted are not substantially compliant, ONTC may:
 - (a) take any action in accordance with Section 7.3. (1);
 - (b) carry out a process whereby all Respondents are directed to correct the deficiencies in their Proposals for re-submission; or,
 - (c) negotiate an agreement for the whole or any part of the Goods and/or Services with a Respondent which has submitted a Non-compliant Proposal.

SECTION 8 – AGREEMENT FINALIZATION AND DEBRIEFING AND SUCCESSFUL RESPONDENT

8.1 Finalization of the Agreement

- (1) ONTC may, in its sole discretion, retain more than one Respondent to provide the Goods and/or Services.
- (2) ONTC reserves the right in its sole discretion to sub-divide and/or bundle the Goods and/or Services which are the subject of this RFP and award one or any number of separate contracts for the Goods and/or Services.
- (3) ONTC may, in its sole discretion, enter into negotiations with one or more Respondent(s) for the purpose of selecting a Successful Respondent(s) and finalizing an agreement.
- (4) Either ONTC or a Respondent may withdraw from negotiations at any time prior to the Successful Respondent(s) being identified.
- (5) The Successful Respondent is expected to enter into the relevant CCDC form of agreement which shall include the Supplementary Conditions and Special Supplementary Conditions attached in Part 5. Proposal Form 5 – Compliance with Contract Documents allows a Respondent to submit suggested changes to the Supplementary Conditions. ONTC does not have any obligation to accept any proposed changes to the Supplementary Conditions and will do so in its sole discretion. ONTC may, in ONTC's sole discretion; (i) consider only a minimal number of changes to the Supplementary Conditions; (ii) consider significant material proposed changes to negatively impact the evaluation of the Respondent's proposal; or (iii) disqualify any Respondent where the changes or the number of changes made by the Respondent to the CCDC form of Agreement would be, in ONTC's sole discretion, too onerous to successfully negotiate within the timeframe set out in Section 8.1 (6) below or are unacceptable to ONTC.

In any event, ONTC will not accept any material changes to the clauses in the CCDC for of Agreement relating to the Confidentiality, Personal Information, Intellectual Property ownership and infringement, Indemnification, Limitation of Liability or rights of ONTC on termination. ONTC, as an Ontario Crown corporation, is unable to provide indemnities pursuant to s.28 of the *Financial Administration Act* (Ontario).

If a Respondent does not submit any proposed amendments in Proposal Form 5, it will be deemed to have accepted and will be required to execute the Final Agreement in the form attached to this RFP. If a Respondent has submitted proposed amendments to the Final Agreement, negotiations respecting those amendments shall be conducted within the timeframe set out in Section 8.1(6).

- (6) If a Successful Respondent fails or refuses to enter into and execute the Final Agreement within ten (10) Business Days of being notified they are the Successful Respondent

(ONTC may extend such period of time in ONTC's sole discretion), or a Successful Respondent fails or refuses to provide the documentation in accordance with Section 8.1(7), ONTC may, in its sole discretion, take any one of the following actions:

- (a) terminate all negotiations and cancel its identification of that Respondent as a Successful Respondent;
 - (b) select another Respondent or Short-Listed Respondent as the Successful Respondent;
 - (c) take any other action in accordance with Section 7.3; or,
 - (d) pursue any other remedy available to ONTC at law.
- (7) Prior to supplying any Goods and/or Services pursuant to the Contract, the Successful Respondent shall deliver to ONTC:
- (a) The performance bond and the labour and material bond described in the RFP Documents. The form of such bonds shall comply with the requirements prescribed in the *Construction Act*. Refer to the link below for the appropriate forms (Form 31 and 32).

<http://ontariocourtforms.on.ca/en/construction-lien-act-forms/>
 - (b) Certificates of insurance as specified in the CCDC 2 – 2020 Supplementary Conditions;
 - (c) Executed Contractors Health and Safety Responsibility Agreement. Refer to Proposal Form 7;
 - (d) Respondent's Health and Safety, and Environmental Policies as identified in Proposal Form 7; and,
 - (e) A current Clearance Certificate issued by the Workplace Safety and Insurance Board, if applicable.

8.2 Notification If Successful or Not

- (1) The Successful Respondent and unsuccessful Respondents will be notified by ONTC in writing regarding their success or failure in the RFP Process.

8.3 Debriefing

- (1) Respondents may request a debriefing after receipt of a notification pursuant to RFP Section 8.2. All Respondent requests should be in writing to the Contact Person no later than 60 calendar days after receipt of the notification. ONTC will conduct debriefings in the format prescribed by the OPS Procurement Directive.

SECTION 9 - LEGAL MATTERS AND RIGHTS OF ONTC

9.1 Limit on Liability

- (1) The total liability of the Respondent to ONTC for loss and damage arising from the Respondent who is selected as the Successful Respondent but then fails to deliver the Contract Security, evidence of insurance or other documents required under Section 8.1(7) within the time period specified in Section 8.1(6) or fails to execute the Final Agreement shall be limited to the value of the Bid Performance Security provided by the Respondent pursuant to Section 4.3. The liability of the Respondents for any other loss or damage suffered by ONTC as part of this RFP Process shall be without limit.
- (2) By submitting a Proposal,
 - (a) each Respondent acknowledges ONTC's rights as stated herein and absolutely waives any right of action against ONTC for ONTC's failure to accept the Respondent's Proposal whether such right of action arises in contract, negligence, bad faith, or any other cause of action;
 - (b) each Respondent covenants and agrees that, under no circumstances, shall ONTC, or any of its employees, officers, representatives, agents or advisors, be liable to any Respondent, whether in contract, tort, restitution, or pursuant to any other legal theory, for any claim, action, loss, damage, cost, expense or liability whatsoever and howsoever arising from this RFP Process, a Respondent's Proposal in response to this RFP Process, or due to the acceptance or non-acceptance of any Proposal, or as a result of any act or omission by ONTC and/or its employees, officers, representatives, agents or advisors, including any information or advice or any errors or omissions that may be contained in the RFP Documents, or any other documents or information provided to a Respondent, or arising with respect to the rejection or evaluation of any or all of the Proposals, any negotiations with any of the Respondents, or the selection of any Respondent as a Short-listed Respondent or the Successful Respondent; and,
 - (c) each Respondent shall indemnify and hold harmless ONTC, its employees, officers, representatives, agents and advisors, from and against any and all claims, demands, actions or proceedings brought by third parties, including but not limited to the Respondent's subcontractors or suppliers, in relation to this RFP Process.

9.2 Power of Legislative Assembly

- (1) No provision of the RFP Documents (including a provision stating the intention of ONTC) is intended to operate, nor shall any such provision have the effect of operating, in any way, that would interfere with or otherwise fetter the discretion of the Legislative Assembly of Ontario in the exercise of its legislative powers.

9.3 RFP Not a “Bidding Contract” or a Tender

- (1) Notwithstanding any other provision of this RFP, this RFP is not a tender call, ONTC does not intend to create any contractual relations or obligations with any of the Respondents by virtue of issuing this RFP, and this RFP is not an offer to enter into a contract (often referred to as “Contract A”). Except as provided in RFP Section 3.8 and 9.1, neither this RFP nor the submission of a Proposal by a Respondent shall create any legal or contractual rights or obligations whatsoever on any of the Respondent, ONTC, the Government of Ontario or any Ministry of the Government of Ontario.

SECTION 10 – VENDOR PERFORMANCE

10.1 General

- (1) ONTC has established a Vendor Performance Policy, which provides a framework for ONTC to maximize the value for money of its Vendors by:
 - (a) proactively managing the performance of Vendors in accordance with ONTC’s Purchasing Policy; and,
 - (b) creating a record of past performance for use by ONTC when selecting Vendors for the supply of goods and services.

10.2 Vendor Performance Evaluation

- (1) Successful Respondents who enter into a Final Agreement with ONTC may be required to participate in the Vendor Performance Evaluation process.

10.3 Vendor Ratings for Proposal Evaluation Purposes

- (1) ONTC may access a Respondent’s Vendor Performance Evaluations for previous contracts as part of the Evaluation Process. The manner in which the Respondent’s ratings will be used will be identified in the Evaluation Criteria of the RFP Data Sheet.

SECTION 11 – TRANSPARENCY AND FAIRNESS

11.1 General

- (1) ONTC is committed to procuring goods and services through a process that is conducted in a fair and transparent manner, providing equal opportunity to vendors.
- (2) ONTC endeavors to provide specifications that meet the requirements of the procurement without naming specific brands. However, there may be instances where a third-party consultant prepares a specification on behalf of ONTC, and a specific brand is named. In these instances, alternate materials or products may be used if ONTC determines the proposed materials or products are equivalent to the materials or products in the specifications. Respondents shall submit proposed alternate materials or products with their Proposal submission to be considered.

SECTION 12 – INTERPRETATION

12.1 General

- (1) In this RFP, the singular shall include the plural and the plural shall include the singular, except where the context otherwise requires.
- (2) All references in this RFP to “discretion” or “sole discretion” means in the sole and absolute discretion of the party exercising the discretion.
- (3) For clarity, where the expression “Government of Ontario” is used in this RFP, it includes all Ministries and Agencies of the Government of Ontario.



PART 2

**REQUEST FOR PROPOSALS
SUMMARY OF REQUIREMENTS**

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A
 RFP DATA SHEET**

RFP 2024 030 North Bay Locomotive Sand Tower	
Contact Details	
Contact Person	Brinda Ranpura, Procurement Contracts Specialist
Contact Information	555 Oak Street East North Bay, Ontario, P1B 8L3 brinda.ranpura@ontarionorthland.ca (705) 472-4500 ext. 548
Proposal Detail	
Respondents' Meeting	A mandatory Respondents' Meeting carried out by Teams conference call will take place on Tuesday, July 30, 2024 at 10:00 a.m. Respondents must complete the <u>Respondents' Meeting Registration Form</u> and return it via email by Monday, July 22, 2024 at 4:00 p.m. to Brinda Ranpura at brinda.ranpura@ontarionorthland.ca .
Validity of Proposals	90 days following the Submission Deadline
Format of Submission	Respondents shall submit their Proposal through MERX Electronic Bid Submissions (EBS). Refer to Part 1, Request for Proposals, Section 5.1 (1) (a). MERX EBS does not allow Proposals to be uploaded after the Submission Deadline; therefore, Respondents shall ensure they allow sufficient time to upload the documents. Proposals which are submitted by facsimile transmission, by email or by electronic means other than MERX <u>will NOT</u> be considered.
Two-Envelope Process	This procurement will <u>not be</u> a two-envelope process.
Distribution Method	The RFP Documents will be posted on the ONTC website and MERX. Any addenda to the RFP will be shared with those Respondents who attended the Mandatory Respondents' Meeting.

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A
 RFP DATA SHEET *continued***

**RFP 2024 030
 North Bay Locomotive Sand Tower**

Proposal Detail *continued* – Note the requirements below are new to ONTC

Submission Requirements	Respondents are required to submit all of the documents listed below as part of their Proposal. Respondents shall confirm they have included the documents listed below with their Proposal by placing a checkmark in the column “Included in Proposal”. If the Respondent fails to include a document listed below as being “Material”, the respondent may be disqualified in accordance with section 6.2 (3) of the RFP.		
	Item	Included in Proposal (indicate with <input type="checkbox"/>)	Item is classified as Material
	This checklist		
	Proposal Form 1 - Proposal Submission Form		Material
	Proposal Form 2 - Respondent's General Information		Material
	Proposal Form 3 - Acknowledgment to Comply with Part 3 – Request for Proposals Specifications		Material
	Proposal Form 4 - References		Material
	Proposal Form 5 - Compliance with Contract Documents		
	Proposal Form 6 – Respondents' Meeting Registration Form		Material
	Proposal Form 7 - Health, Safety and Environment		Material
	Proposal Form 8 - Schedule of Materials		
	Proposal Form 9 - List of Equipment		
	Proposal Form 10 - Schedule and Proposed Approach		Material
	Proposal Form 11 - List of Personnel <u>and Resumes</u>		Material
	Proposal Form 12 - Contractor's Qualification Statement <u>Include Company Profile and 3 Project Descriptions</u> <u>Include Subcontractor Profiles, if applicable</u>		Material
Proposal Form 13 - Claims			

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A
 RFP DATA SHEET *continued***

RFP 2024 030 North Bay Locomotive Sand Tower			
Important Dates			
Publication Date	Tuesday, July 16, 2024		
Participation Registration Form	Complete and submit to the Contact Person as soon as possible		
Deadline for Additional Information Request	Four (4) full Business Days prior to the Submission Deadline		
Submission Deadline Date and Time	Friday, August 16, 2024, at 2:00:00 p.m. (EST)		
Target Completion Date	December 31, 2024		
Notes Pertaining to Final Agreement			
Liquidated Damages	The per diem rate calculated in relation to Section 10.4 of the Supplementary Conditions \$500 for each calendar day of the delay beyond the prescribed date for Substantial Performance of the Work until Substantial Performance of the Work is achieved and certified, pursuant to the terms of the Contract.		
Procedure of Selection			
Mandatory Requirements	Respondents must first satisfy that all of the Mandatory Requirements listed below have been met. Respondents will receive a pass/fail for each Mandatory Requirement. Respondents who fail any of the Mandatory Requirements will be disqualified from the RFP Process.		
	Mandatory Submission Requirement	Pass	Fail
	Respondent has participated in the Mandatory Respondents' Meeting		
	Respondent has submitted all of the documents as specified in the Submission Requirements listed in Part 2, Request for Proposals, Summary of Requirements, RFP Data Sheet		
	Respondent has provided sufficient evidence to pass the Contractor Safety Pre-Qualification (Part 4 – Form of Proposal, Proposal Form 7, Health, Safety and Environment)		
	Respondent has achieved a minimum score of 10 under Experience and Qualifications		
	Bid Bond and Agreement to Bond included in Proposal Submission (scanned copy acceptable)		

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A *continued*
 RFP DATA SHEET**

RFP 2024 030 North Bay Locomotive Sand Tower		
Procedure of Selection <i>continued</i>		
Evaluation General Procedure	Respondents must score a <u>minimum of 60%</u> for both Experience and Qualifications and Schedule and Proposed Approach to qualify for shortlist consideration. Respondents who fail to score a minimum of 60% in these categories will be disqualified from the RFP Process.	
Evaluation Criteria	Description	Weight
	<p>Price ONTC will use the following to calculate the initial score for price: Lowest price of all Proposals / price of Respondent x 45 x capacity of sand tower/50) = Score</p> <p><i>ONTC reserves the right in its sole discretion to consider the best overall value when evaluating price and adjust the score accordingly. If ONTC, in its sole discretion, is of the opinion that the Respondent has submitted a price that is too low to adequately complete the scope of work, then ONTC reserves the right not to use that price as the "Lowers price of all Proposals".</i></p>	45
	<p>Experience and Qualifications ONTC will assess Respondents' experience and qualifications using the information supplied as part of Part 4 of this RFP. The following sub-weights will apply: Resumes of Key Personnel – 3 points Company Profile – 2 points Project Profile 1, 2 and 3 – 10 points (ONTC may or may not contact references as part of the evaluation and may use this information as part of this score)</p>	15
	<p>Schedule and Proposed Approach ONTC will assess the Respondent's Schedule and Proposed Approach based on the following: Is the Schedule in the format requested and are the milestone dates in conjunction with the ONTC deadline? - 3 points Has the critical path been identified? - 2 points Is the schedule and proposed approach logical and does it have sufficient detail with durations for each task? - 10 points</p>	15

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A *continued*
 RFP DATA SHEET**

RFP 2024 030 North Bay Locomotive Sand Tower		
Procedure of Selection <i>continued</i>		
	<p>Local Benefit Describe how and when you will use local workforce, local vendors, local manufacturers, local contractors, and local apprentices/trainees to achieve the project goals and provide the requested services – 10 points Describe your organization’s diversity programs – 5 points</p>	15
	<p>Local Knowledge Describe your experience with the climatic (cold temperatures) and environmental requirements in Northern Ontario – 10 points</p>	10
	Total	100
Alternative Proposals		
General Procedure	ONTC will consider alternative proposals for this procurement. IN the event ONTC receives an alternative proposal, it will be reviewed by the consulting engineer to determine if the solution achieves the objectives. If it does, then it will be evaluated along with the other submissions in the same manner.	

**PART 2 – REQUEST FOR PROPOSALS
SUMMARY OF REQUIREMENTS
SCHEDULE 2-B
PARTICIPATION REGISTRATION FORM**

Required in order to register and receive any communications in relation to the requirement referenced below.

Date: _____
Reference Number: RFP 2024 030
Description of Requirement: North Bay Locomotive Sand Tower

I, the undersigned, am registering to participate in the above referenced requirement and will be the primary contact for any communications in relation to this process and project until further advised.

Company Name: _____
Address: _____

Name of person registering to represent company referenced above (please print): _____
Email Address: _____
Phone Number: (Main Office Number) _____
Cell Number: _____

Signature of Primary Contact: _____

Return form to the Contact Person as referenced below via email as an attachment:

Thank you.

Brinda Ranpura
Procurement Contracts Specialist
Ontario Northland Transportation Commission
Phone: 705-472-4500 Ext. 548
Email: brinda.ranpura@ontarionorthland.ca
Website: www.ontarionorthland.ca



PART 3
REQUEST FOR PROPOSALS
SPECIFICATION

PART 3 – RFP SPECIFICATIONS
SCHEDULE 3-A-1
SCOPE OF WORK

Introduction

Ontario Northland Transportation Commission (ONTC) is a transportation agency of the Province of Ontario. ONTC's services are offered throughout northeastern Ontario and include rail freight, passenger rail, motor coach transportation, and rail repair and remanufacturing services.

Ontario Northland Transportation Commission (ONTC) is inviting Respondents to submit a proposal for the North Bay Locomotive Sand Tower.

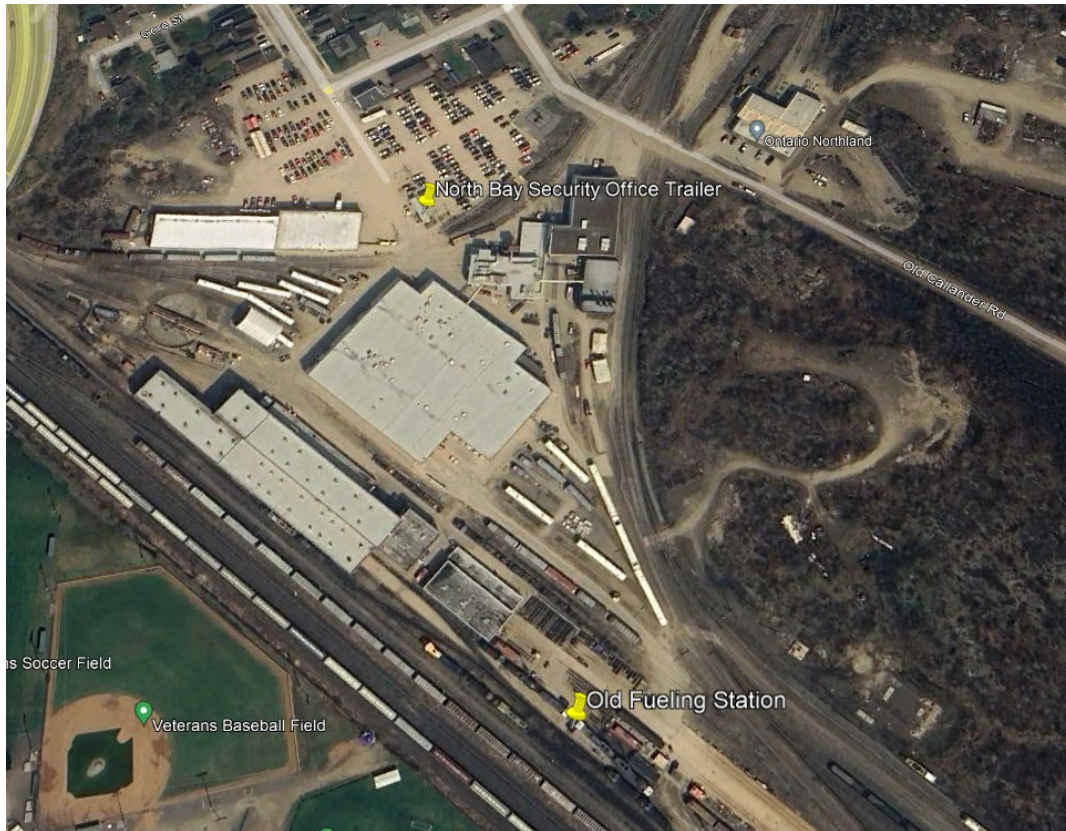
Summary

ONTC is seeking a contractor to supply and install a 35 to 50 ton sand tower at 915 McIntyre Street East at the old fueling station in the yard.

The tower will be located between two tracks and able to service locomotives on both tracks. The contractor will be responsible for engineered drawings for the concrete footing and sand tower, electrical and air connections, new sand tower including delivery and install, and testing/commissioning of the sand tower.

The existing fueling station shed and section of the concrete pad demolition are the contractor's responsibility. The distance between the centre lines of the two tracks is approximately 25 feet. ONTC would like to install the largest sand tower (up to 50 ton) that can cost effectively be installed at this location. Please find the location below.

GPS coordinates: Lat 46.297513°, Long -79.452071°



General Requirements

Demolition

As required removal of the concrete pad for the new footing. Old fueling station shed to be fully removed. Electrical to be disconnected from shed and terminated to the nearest pole with a service loop. Water and electrical are present in the concrete pad. The fueling station shed is approximately 100 sq. ft. A designated substance survey and soil sampling is provided. Private utility locates report is provided.

Sand Tower Concrete footing

Contractor is responsible for stamped engineered drawings for new sand tower footing. Geotechnical survey of area will be provided to successful respondent. Geotechnical survey of adjacent area in the yard is provided. There is a water main that runs under the concrete pad where new tower is to be installed. It is 8 or more feet under the concrete pad. There are access hatches with lids in the pad. The tower is to be installed in widest portion of pad where the old fueling station shed is located. Rail clearances to be followed for sand tower design (see TC E-05). All excavated soil is to be removed from ONTC site and disposed of properly by the contractor. Contractor to assume all excavated soil is contaminated with diesel fuel. See Designated Substance Survey for further information.







New Sand Tower Requirements

- Capacity between 35 and 50 tons, 699 cubic feet minimum
 - Locomotive sand will be offloaded by self-unloading pneumatic truck into the elevated storage silo.
- Sand level sensor
 - Low level switch with indicator light when 120 cubic feet left in silo
 - High level switch when full
- Gravity feed locomotive sand into the single centre fill ports for sand boxes located at each end of the locomotive
- Temperature variation of -45 degrees C to +45 degrees C
- Elevated storage silo mounted on top of a supporting structure
- Interior and exterior painted
- On top of silo a platform with guard rails and toe plates
- Access ladder with safety cage
- Access to swivel and shutoff valve
- Inspection opening on top of silo
- Clean out port for wet sand at bottom of silo
- Pressure relief valve on top of silo to prevent over pressure when sand is loaded
- Truck unloading conveying line for loading sand from the truck, min 4" diameter

- Two sand delivery arms for filling the locomotive (one for each track). Locomotive must be re-spotted to bring the fill point to each end of the locomotive.
 - Min 3" diameter arm with gravity feed and swivel.
 - Vertical travel to accommodate sand boxes ranging from 11 feet to 16 feet above top of rail.
 - Single outlet on sand delivery arm.
 - Lateral movement for leeway in spotting the locomotive
 - Arm moved upwards when not in use to clear the locomotive. Can be easily reached from locomotives or catwalk
 - Valve at end of arm
- Distance between sanding tower and nearest rail to meet Transport Canada TC E-05
- Isolation valve so swivel and sand delivery arm can be repaired without emptying silo.
- Fall arrest system
- Self cleaning dust collector for when filling silo with truck
- Electrical service of 480V or 120V

Optional Items

- Catwalk with railings to load sand into the locomotive on both tracks. Employees can fill locomotives from the catwalk. Can be single catwalk that can rotate or extend to both sides.

Deliverables

Preconstruction Phase

- Engineer stamped drawings of the foundation and sand tower.
- Engineer stamped mechanical and electrical drawings.
- When required, Contractor shall be responsible for completing Pre-start review as required by O.Reg 851.

Construction Phase

- Demo of shed and removal of portion of concrete pad
- Excavation and concrete footing
- Install of new sand tower

Close-out Phase

- Test and commission sand tower to ensure it functions correctly
- Turn over of all manuals for operations and maintenance
- Project records including as-built drawings
- Provide training and demonstration to ONTC employees.

Schedule of services

- Drawings of sand tower and concrete footing to be submitted to ONTC within 3 weeks of contract being signed.
- Demo and footing to be completed by October 4, 2024.
- Sand tower to be installed by November 29, 2024.
- Commissioning and testing to be completed by December 31, 2024.

PART 3 – RFQ SPECIFICATIONS
SCHEDULE 3-A-2
SPECIFICATIONS

Specifications

Division 00	
00 31 00	Available Project Information
1986	Repair Platforms RIP – Subsoil Investigation
2004	North Bay Yard Monitoring Wells – Groundwater Investigation
	Landshark Private Locates May 22, 2024
	ONR Fueling Facility – DSS Report
Tc_e_05e	Standards Respecting Railway Clearances
Division 01	
01 11 00	Summary Of Work
01 14 00	Work Restrictions
01 31 19	Project Meetings
01 32 00	Construction Progress Documentation
01 32 16.16	Construction Progress Schedule – Critical Path Method (CPM)
01 32 33	Photographic Documentation
01 33 00	Submittal Procedures
01 35 29.06	Health and Safety Requirements
01 35 35	Fire Safety Requirements
01 35 43	Environmental Procedure
01 41 00	Regulatory Requirements
01 43 00	Quality Assurance
01 45 00	Quality Control
01 51 00	Temporary Utilities
01 52 00	Construction Facilities
01 55 26	Traffic Controls
01 56 00	Temporary Barriers and Enclosures
01 57 00	Temporary Controls
01 61 00	Common Products Requirements
01 71 00	Examination and Preparation
01 73 00	Execution
01 74 00	Cleaning
01 74 19	Waste Management and Disposal
01 77 00	Closeout Procedures
01 78 00	Closeout Submittals
01 79 00	Demonstration and Training
01 91 13	General Commissioning Requirements
01 91 13.13	Commissioning Plan
01 91 13.16	Commissioning Forms

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 DEFINITIONS

- .1 Available Project Information: information identified in this section, of any type, and in any form, and identified as Reference Documents. Available Project Information, or any part thereof, does not form part of the Contract Documents unless specifically incorporated into Contract Documents by means of copying, transcribing, or referencing, or is listed in the Agreement as a Contract Document.
- .2 Contractor: synonymous with Respondent

1.03 USE AND RELIANCE UPON AVAILABLE PROJECT INFORMATION

- .1 Available Project Information is made available to Respondents for the purpose of disclosing information that is available to the Consultant and Owner.
- .2 Per CCDC, Available Project information is made available to Respondents to fulfill the Owner's duty to disclose all relevant Project information to Respondents.
- .3 Do not consider the Available Project Information as a representation or warranty that the information is necessarily accurate, complete, or appropriate.
- .4 Respondents are responsible for interpreting and forming their own conclusions about the Available Project Information, including consideration of the time the document was created. Respondents are encouraged to obtain specialist advice if necessary. The Owner and Consultant assume no responsibility for interpretations or conclusions made.
- .5 In the event there is a conflict between the Contract Documents and the recommendations contained in the Available Project Information, the Contract Documents shall govern.

1.04 AVAILABLE PROJECT INFORMATION

- .1 The following Available Project Information is not incorporated into the Contract Documents, but is made available to Respondents:
 - .1 – Designated Substance Survey and Soil Sampling Report - Fueling Facility by Thomas Contracting on June 25, 2019
 - .2 – Standards Respecting Railway Clearances TC E-05 by Transport Canada on May 14, 1992
 - .3 – North Bay Yard Monitoring Wells Groundwater Investigation by Knight Piesold on November 4, 2004

- . 4 – Subsoil Investigation Repair Platforms O.N.R. Complex North Bay, Ontario by Trow Ontario Ltd on July 30, 1986
- . 5 - Private Utility Locate Report by Landshark Locates on May 22, 2024
- .2 The following Available Project Information is incorporated into the Contract Documents:
 - .1 ONTC Contractor / Subcontractor Policy
 - .2 ONTC Hot Work Policy
 - .3 ONTC Electrical Safety Policy
 - .4 Canadian Rail Operating Rules
 - .5 Contractors Working On ONTC Property Near Railway Tracks.
 - .6 Railway Flagging Protection Policy

1.05 RELATED INSTRUCTIONS

- .1 Report any irregularities or changed surface conditions at the Place of the Work to the Owner a minimum of 7 days before RFP close.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION



Trow

**SUBSOIL INVESTIGATION
REPAIR PLATFORMS
O.N.R. COMPLEX
NORTH BAY, ONTARIO**

PREPARED FOR:

ONTARIO NORTHLAND RAILWAY

**Project: N861033G
July 30, 1986**

**TROW ONTARIO LTD.
Toronto, Hamilton, London,
Sudbury, North Bay, Ottawa**

**1074 Webbwood Drive
Sudbury, Ontario P3C 3B7
(705) 674-9681**



North Bay Branch

Trow Ontario Ltd.
Consulting Engineers
R.R. 4, Site 2, Compartment 9
North Bay, Ontario. P1B 8G5
Telephone: (705) 472-2220

N861033M

July 30, 1986

Ontario Northland Railway
195 Regina Street
North Bay, Ontario
P1B 8L3

ATTENTION: Mr. G. A. Payne, P. Eng.
Chief Engineer

Dear Sirs:

**Subsoil Investigation
Repair Platforms
O.N.R. Complex
North Bay, Ontario**

Further to your authorization, we have completed the field work in connection with the above noted project. Our comments and observations, based on the findings at the five test locations, are outlined in the following paragraphs.

1.0 FIELD WORK & SUBSOIL

The field work comprised five carefully sampled boreholes advanced with a truck mounted soils drilling rig on July 16, 1986, at the approximate locations indicated on the attached site plan, Drawing #1. The boreholes were put down to a depth of approximately 3.5 m below existing grade.

Details regarding the subsoil encountered are included in the attached borehole logs, Drawings 2 to 6.

Based on this data, the subsoil comprised a surficial, discontinuous layer of concrete over fill. The fill consisted, for the most part, of sand and gravel with cobble sizes and some slag in

the upper levels. The fill was moist to wet, compact and contained odd organic inclusions near the base. The fill extended to depths, below grade, of 1.4 m in borehole 1 to 2.0 m in borehole 5.

Underlying the fill was the natural sandy subsoil which was, for the most part, fine, brown/grey, wet and compact becoming denser with depth. The sand continued for the full depth of the boreholes.

2.0 GROUNDWATER

The groundwater observations are included on the attached borehole logs, Drawings 2 to 6. This data indicates that the groundwater level at the time of the investigation was at a depth of approximately 0.6 to 0.8 m below grade. This level can be expected to fluctuate seasonally and will probably be higher during wet periods of the year (i.e., spring thaw and late fall).

3.0 JACKING SLABS

According to your design consultants the existing thick concrete jacking slabs are in relatively good condition and only the top 150 mm is to be replaced. The existing fill immediately below the track slabs and the underlying sandy subsoil are capable of supporting a net allowable bearing pressure of at least 100 kPa which is in excess of the required loadings of 20 kPa to 30 kPa.

4.0 BACKFILL AND PAVEMENTS

It is understood that the area between the repair tracks requires rehabilitation. The 150 mm thick concrete slab over this area shows deterioration as do other asphalt covered sections.

The deteriorated condition of these pavement areas are probably related both to freeze-thaw on the concrete and possibly uneven settlement



of the underlying granular fill. It is also conceivable that there has been some local undermining and loss of granular support due to broken or improperly placed drainage pipes, etc.

We recommend removal of the fill between the tracks to a minimum overall depth of 800 mm. It is understood that this should correspond to the base of the adjacent jacking slabs. The proposed 180 mm reinforced concrete pavement may be supported on a granular base as follows:

Subbase - Granular Class 'B' - 460 mm

Base - Granular Class 'A' - 160 mm

Prior to backfilling, we would recommend that the exposed subgrade be proofrolled with a static roller and inspected. If, during the proofrolling phase or inspection, the subgrade shows signs of distress or deleterious materials are evident, then these locations should be subexcavated and replaced with additional granular class 'B' fill. The granular class 'B' used should comprise well graded sand and gravel and compacted to a minimum of 100 per cent standard Proctor maximum dry density.

Where excavation is required below or within the influence of any trackage (i.e., within a 1:1 slope of the ties) then the backfill used should comprise granular class 'A' for the full depth of the excavation. This backfill must be compacted to a minimum of 98 per cent modified Proctor maximum dry density.

In any other locations where the 180 mm concrete slab is not specifically required, an asphalt pavement of 90 mm may be incorporated to support the intermittent loading of truck traffic.

Although subdrains are often employed successfully on pavement projects, it is felt that their use on this project would be of limited benefit.

5.0 BURIED SERVICES AND FROST PENETRATION

Installation of the buried services will be problematic because of the prevailing high water table within the predominantly sandy subsoil.

To obtain sufficient earth cover for frost (i.e., for storm sewers) excavations will be required below the water table. Excavations in the sand and gravel fill above the water table should be relatively straightforward with side slope remaining more or less stable at a slope of no steeper than 45 degrees to the horizontal. However, excavations below this level will become increasingly problematic (due to higher water seepages) and below some 0.3 m below the groundwater table, positive methods (i.e., sheeting and/or well points) for groundwater control will probably be required.

It is recommended that the backfill in any service trenches comprise material that will result in a compatible soil cross-section in regards to frost susceptibility. The bedding, depth of cover, etc., should be as outlined in appropriate O.P.S.S. specifications (eg. OPSD 802.03).

The depth of frost penetration that can be expected, based on the environment, soil and groundwater conditions, is estimated to be 2000 mm to 2200 mm. In order to circumvent the potential problem of excavations below the groundwater table it may be feasible to design shallower services utilizing rigid insulation. The actual thickness of insulation required will depend on the earth cover, etc. The thickness of insulation and configuration should be designed in consultation with reputable insulation suppliers, eg. Dow Chemicals of Canada Ltd.

The excavated material, free of excessive organics would probably be suitable for use as general backfill and where free-draining material is required. It is suggested that the material be properly evaluated during excavation to establish its suitability for reuse.

6.0 LIMITATIONS

The comments given in this report are intended only for the guidance of the design engineer. The number of boreholes required to determine the local underground conditions between tests, which may affect construction costs, techniques, sequencing, equipment and scheduling, etc., would be greater than has been carried out for these design purposes. In this light, any contractors bidding on or undertaking the works should decide on their own interpretation of both the factual borehole data and groundwater levels to draw their own conclusions as to how the subsurface conditions may affect them.

The terms of reference for the geotechnical investigation for this project were presented previously. If there are any changes, such as pavement area or other features which may affect our analysis, the information obtained during this investigation may be inadequate.

In this light, the revised design should be reviewed by this office and, if necessary, additional field work and reporting undertaken.

Whereas this investigation has commented on general construction problems, the presence of conditions which would be difficult to establish from small diameter boreholes may affect the type and nature of construction procedures and dewatering, etc., which would be used in practice by the contractor. These conditions include, for example, local and seasonal fluctuations in the groundwater table and erratic changes in the soil profile between the test locations, etc.

The investigation and comments are necessarily on-going as new information of underground conditions becomes available. For example, more specific information will be available with respect to conditions between the test locations when construction is underway. The interpretation between the boreholes, as well as the recommendations of this report, must, therefore, be checked through field inspections provided by Trow to validate the information for use during the construction stage.



We trust this report provides you with sufficient information to proceed with design. If you have any questions, please do not hesitate to contact the undersigned at this office.

Yours very truly,
TROW ONTARIO LTD.

for *Douglas Costal*
K.J. Jansons, P. Eng.

I. W. Gore
I. W. Gore, P. Eng.

KJJ:dadc

Encl.

Dist: Ontario Northland Railway (2)

Mr. G. A. Payne, P. Eng.

Cole Sherman & Assoc. Ltd. (1)

Mr. G. L. Reid, P. Eng.

K. J. JANSONS

1971

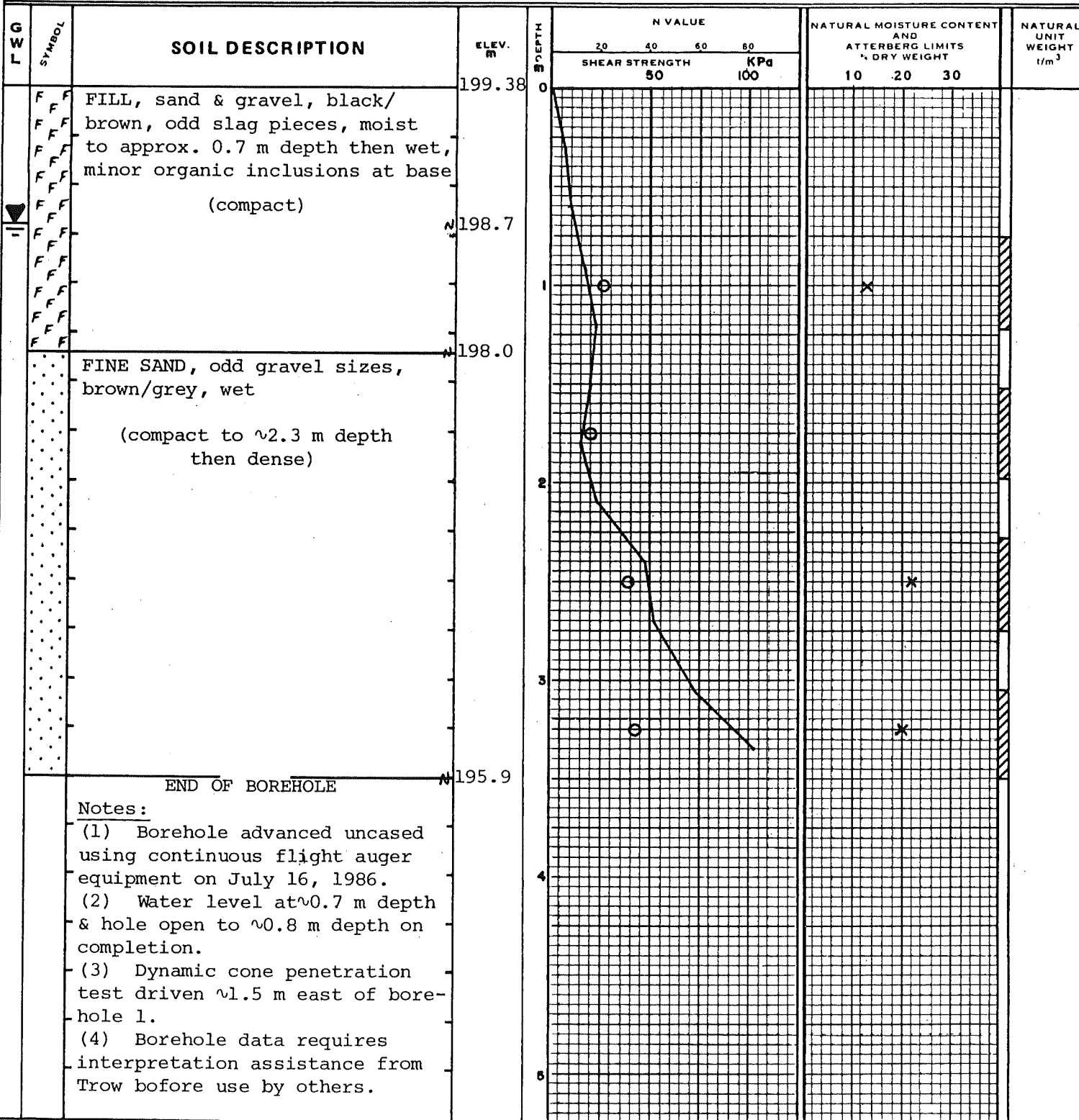
BOREHOLE LOG

JOB No. N861033G

BOREHOLE No. 1

DRAWING No. 2

PROJECT <u>Repair Platform</u>	AUGER SAMPLE	⊠	NATURAL MOISTURE	x
LOCATION <u>O.N.R. Complex</u>	SPT (N) VALUE	○ ○	PLASTIC AND LIQUID LIMIT	—○—
<u>North Bay, Ontario</u>	DYNAMIC CONE TEST	—		
	SHELBY TUBE	● ● ■	UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE	○ ⊕ ○
	FIELD VANE TEST	+ s	% STRAIN AT FAILURE	15 10
HOLE LOCATION AND DATUM SEE DRAWING NO. 1	LAB VANE TEST	t	PENETROMETER	▲



BOREHOLE LOG

JOB No. N861033G

BOREHOLE No. 2

DRAWING No. 3

PROJECT Repair Platform

LOCATION O.N.R. Complex

North Bay, Ontario

HOLE LOCATION AND DATUM SEE
DRAWING NO. 1

AUGER SAMPLE

SPT (N) VALUE

DYNAMIC CONE TEST

SHELBY TUBE

FIELD VANE TEST

LAB VANE TEST

○ ○

● ●

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+ S

t

NATURAL MOISTURE

PLASTIC AND LIQUID LIMIT

UNDRAINED TRIAXIAL AT

OVERBURDEN PRESSURE

% STRAIN AT FAILURE

PENETROMETER

x

○ ⊕

10

▲

LWG	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	N VALUE				NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT			NATURAL UNIT WEIGHT t/m ³
					20	40	60	80	10	20	30	
					SHEAR STRENGTH KPa							
	⊠	CONCRETE SLAB, ~50 mm over FILL, sand & gravel, odd cobbles, brown, moist to approx. 0.6 m depth then wet below (compact)	199.42	0								
	○	FINE SAND, grey, wet, odd organics at upper levels (compact)	197.9	2								
	⊠	END OF BOREHOLE	195.9	4								

Notes:

- (1) Borehole advanced uncased using continuous flight auger equipment on July 16, 1986.
- (2) Water level at ~0.6 m depth & hole open to ~0.7 m depth on completion.
- (3) Borehole data requires interpretation assistance from Trow before use by others.










BOREHOLE LOG






JOB No. N861033G

BOREHOLE No. 3

DRAWING No. 4

PROJECT Repair Platform
 LOCATION O.N.R. Complex
North Bay, Ontario
 HOLE LOCATION AND DATUM SEE
 DRAWING NO. 1

AUGER SAMPLE 
 SPT (N) VALUE  
 DYNAMIC CONE TEST 
 SHELBY TUBE   
 FIELD VANE TEST  S
 LAB VANE TEST  t

NATURAL MOISTURE  x
 PLASTIC AND LIQUID LIMIT 
 UNDRAINED TRIAXIAL AT
 OVERBURDEN PRESSURE  15
 % STRAIN AT FAILURE  10
 PENETROMETER  ▲

LEG	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	N VALUE		NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT			NATURAL UNIT WEIGHT t/m ³
					20	40	60	80	10	
	F	FILL, medium/coarse sand with odd gravel & cobble sizes, 50 mm concrete obstruction at approx. 0.8 m depth, brown, moist to approx. 0.6 m depth then wet (compact)	199.40	0	SHEAR STRENGTH 50 100 KPa					
	F	FINE SAND, odd medium & coarse seams, grey, wet (compact to ~2.5 m depth then dense)	197.5	2	○		*			
	F		195.9	4	○		*			
		END OF BOREHOLE		5						
		Notes: (1) Borehole advanced uncased using continuous flight auger equipment on July 16, 1986. (2) Borehole caved wet at ~0.6 m depth on completion. (3) Borehole data requires interpretation assistance from Trow before use by others.								

BOREHOLE LOG

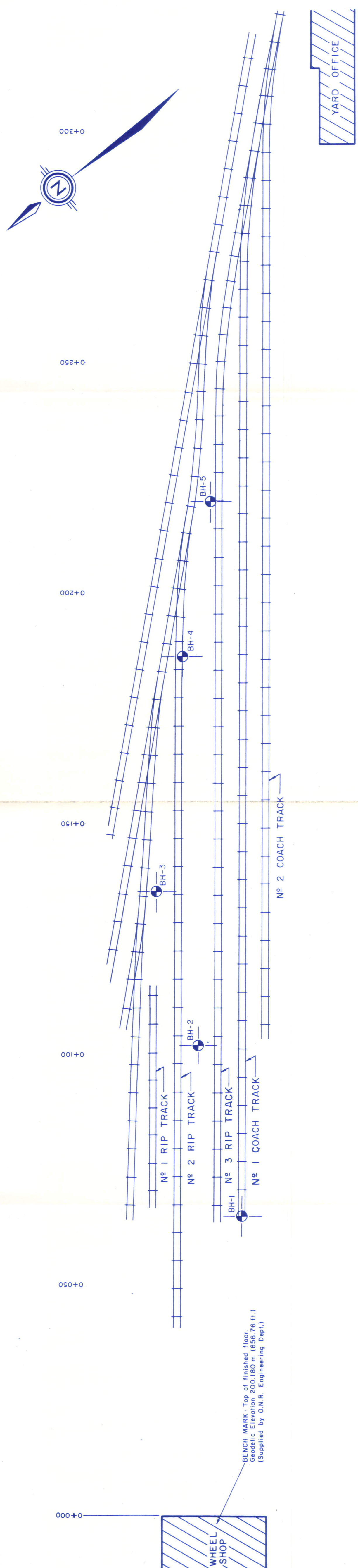
JOB No. N861033G

BOREHOLE No. 5

DRAWING No. 6

<p>PROJECT <u> Repair Platform </u></p> <p>LOCATION <u> O.N.R. Complex </u></p> <p style="margin-left: 20px;"><u> North Bay, Ontario </u></p> <p>HOLE LOCATION AND DATUM SEE DRAWING NO. 1</p>	<p>AUGER SAMPLE SPT (N) VALUE</p> <p>DYNAMIC CONE TEST</p> <p>SHELBY TUBE</p> <p>FIELD VANE TEST</p> <p>LAB VANE TEST</p>	<p><input type="checkbox"/> NATURAL MOISTURE</p> <p><input type="checkbox"/> PLASTIC AND LIQUID LIMIT</p> <p><input type="checkbox"/> UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE</p> <p><input type="checkbox"/> % STRAIN AT FAILURE</p> <p><input type="checkbox"/> PENETROMETER</p>	<p>x</p> <p>—○—</p> <p>○</p> <p>●</p> <p>+ s</p> <p>t</p> <p>○</p> <p>5</p> <p>10</p> <p>▲</p>
--	--	--	--

LEG	SYMBOL	SOIL DESCRIPTION	ELEV. m	DEPTH m	N VALUE				NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT			NATURAL UNIT WEIGHT t/m ³
					20	40	60	80	10	20	30	
					SHEAR STRENGTH KPa							
	F F F F	FILL, sand & gravel with slag, brown/black (ballast?), piece of wood at base (compact/dense)	199.54	0								
	F F F F		198.7	1	○				x			
	F F F F		197.5	2		○	9/50 mm (obstruction)			*		
	F F F F	SAND, fine/medium, grey/brown, wet (compact/dense)	196.0	3	○				x			
		END OF BOREHOLE	196.0	4								
		<u>Notes:</u> (1) Borehole advanced uncased using continuous flight auger equipment on July 16, 1986. (2) Water level at ~0.8 m depth & hole open to ~0.9 m depth on completion. (3) Borehole data requires interpretation assistance from Trow before use by others.		5								



LEGEND



BOREHOLE

NOTE: Borehole locations supplied by
O. N. R. Engineering Dept.
Do not use borehole elevations
for design purposes.

BENCH MARK: Top of finished floor.
Geodetic Elevation 200.180 m (656.76 ft.)
(Supplied by O.N.R. Engineering Dept.)

NOTE

- 1) The boundaries and soil types have been established only at Bore Hole locations. Between Bore Holes they are assumed and may be subject to considerable error.
- 2) Soil samples will be retained in storage for 3 months and then destroyed unless client advises that an extended time period is required.
- 3) Topsoil quantities should not be established from the information provided at the borehole locations.



Trow

GEOTECHNICAL INVESTIGATION

JACKING PLATFORMS
O. N. R. COMPLEX
NORTH BAY, ONTARIO.

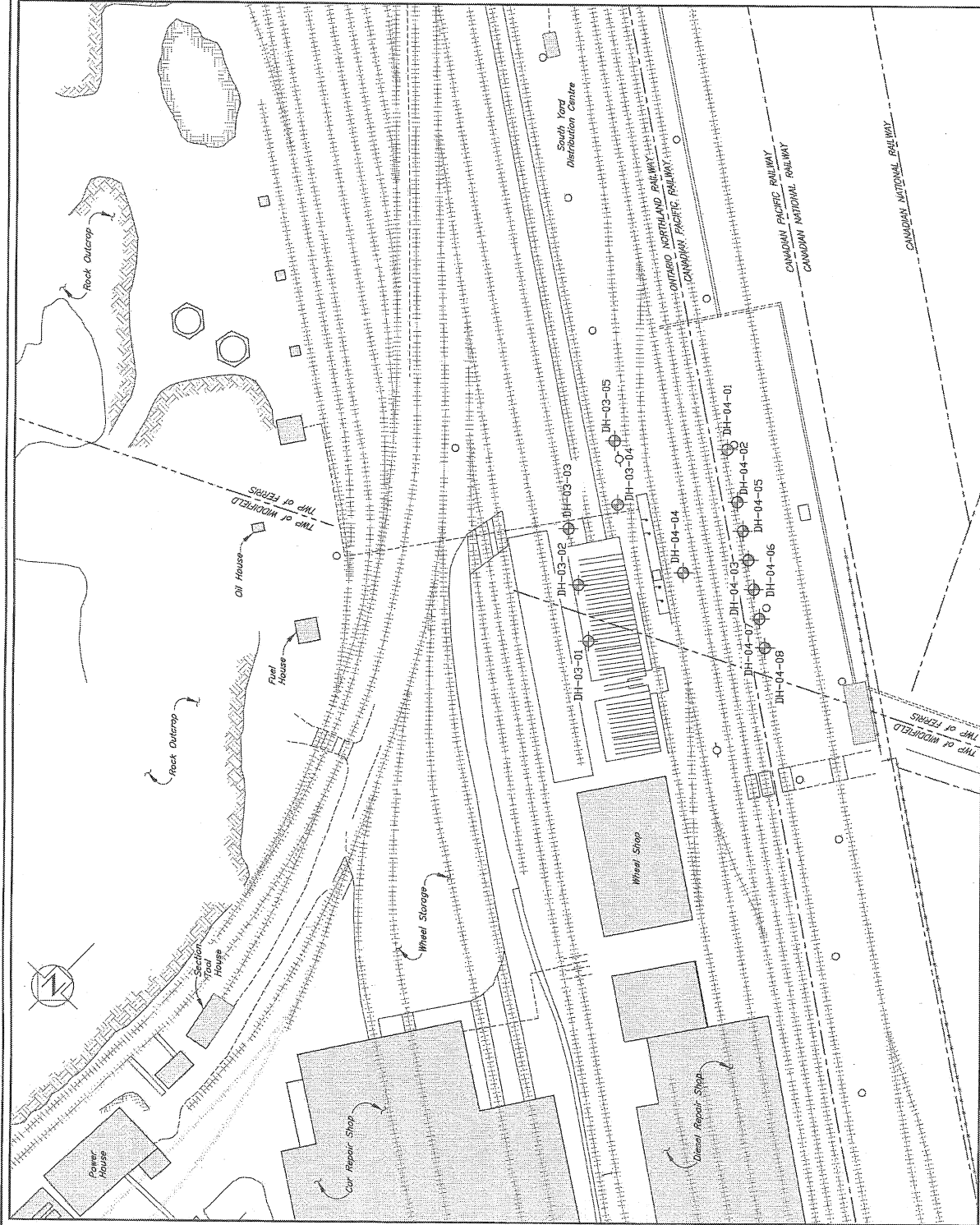
PLAN
SCALE 1 : 480 (1" = 40')

PROJ. N861033G

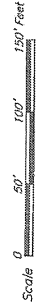
DATE JULY 1986

DWG. No. 1

NORTH BAY
FUEL STAND



- LEGEND:**
- Building
 - Rock Outcrop
 - Railway Tracks
 - Property Boundary
 - Ditch
 - Approximate Location of Groundwater Monitoring Well



ONTARIO NORTHLAND
GROUNDWATER INVESTIGATION
MONITORING WELL LOCATIONS

Knight Piésold
CONSULTING

PROJECT/ASSIGNMENT NO. NH102-00099/2
REF. NO. NH-10-06
DATE: 01/01/06

FIGURE 1

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: DD

NORTHING: _____

DATE DRILLHOLE STARTED: 19-Aug-04

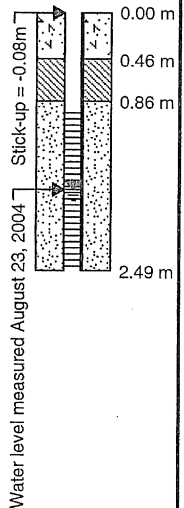
EASTING: _____

DATE DRILLHOLE FINISHED: 19-Aug-04

GROUND ELEVATION: _____

DATE INSTRUMENTATION COMPLETED: 19-Aug-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY		Drill Comments and Instrumentation Details		
						PL	M/C	LL	25	75	125		Description	Graphic Log			
						SPT N-Value (blows per foot) (100 Blows = Refusal)			Peak (kPa)								
						12.5	25	37.5	25	50	75	25	75	125			
0	0.0												Ground Surface				
		25	Shelby Tube	SA-1	22								Sand and gravel (0.00 to 1.73m) Compact to loose, dry to moist, brown to dark brown sand and gravel, trace silt; very faint ammonia-like odour at bottom of layer; charcoal-like substance at 1.17m.				
1	-1.0	29	Shelby Tube	SA-2	5												
			Shelby Tube	SA-3													
		25	Shelby Tube		4												
2	-2.0		Shelby Tube	SA-4													
			Shelby Tube	SA-5													
		83	Shelby Tube	SA-6	100								Sand and gravel - Silt (1.73 to 1.93m) Transition				
													Silt (1.93 to 2.49m) Soft, moist to wet, brown-grey silt and fine sand; trace organics; faint ammonia-like odour; black "oily" substance on outside of sample.				
3	-3.0																
4	-4.0																
5	-5.0																
6	-6.0																
7	-7.0																
8	-8.0																
9	-9.0																
10	-10.0																



SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tillings
- Bedrock
- Gravel
- Sand
- Silt
- Clay
- Organics

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 1

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: DD

NORTHING: _____

DATE DRILLHOLE STARTED: 19-Aug-04

EASTING: _____

DATE DRILLHOLE FINISHED: 19-Aug-04

GROUND ELEVATION: _____

DATE INSTRUMENTATION COMPLETED: 19-Aug-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	SPT N-Value (blows per foot) (100 Blows = Refusal)	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details		
							PL	M/C	LL	25	75	125				25	75
0.0	0.0													Ground Surface			
0.42		42	SA-1	16										Sand and gravel (0.0 to 1.8m) Compact to loose, dry, brown, silt, sand and gravel; faint ammonia-like odour below 0.30 m.	Stick-up = -0.08m		
1.0	-1.0	4	SA-2	7													
1.54		54	SA-3	4										Sand and gravel - Silt (1.80 to 1.93 m) Transition; strong ammonia-like odour	Water level measured August 23, 2004		
1.83		83	SA-4														
1.93			SA-5														
2.46			SA-6	100										Silt (1.93 to 2.46m) Soft, moist to wet, brown-grey silt and fine sand; strong ammonia odour; black "oily" substance on outside of sample			
2.46														End of drillhole: 2.46 m			
														Assumed Bedrock			

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tailings
- Bedrock
- Gravel
- Sand
- Silt

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 2

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: DD

NORTHING: _____

DATE DRILLHOLE STARTED: 19-Aug-04

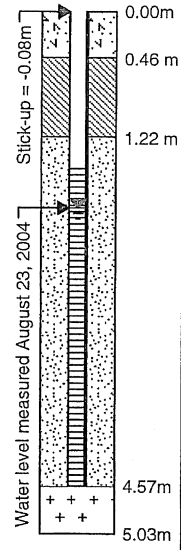
EASTING: _____

DATE DRILLHOLE FINISHED: 19-Aug-04

GROUND ELEVATION: _____

DATE INSTRUMENTATION COMPLETED: 19-Aug-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	Atterberg Limits (%)			Field Vane Shear Strength			STRATIGRAPHY		Drill Comments and Instrumentation Details
						PL	M/C	LL	25	75	125	Graphic Log	Description	
SPT N-Value (blows per foot) (100 Blows = Refusal)						PL M/C LL			Remould Peak					
12.5 25 37.5						25 50 75			25 75 125					
									kPa					
									Peak					
									25 75 125					
0	0.0												Ground Surface	
		33	SA-1	13									Sand and gravel (0.00 to 1.93m) Compact, dry to moist to wet, brown sand and gravel, trace clay and silt; charcoal-like substance at 1.37m; strong ammonia-like odour.	
1	-1.0	13	SA-2	12										
		50	SA-3	4										
			SA-4											
2	-2.0													
		58	SA-5	21									Silt (1.93 to 5.03m) Very stiff, wet, brownish grey silt and fine sand; strong ammonia-like odour; black "oily" substance on outside o	
3	-3.0													
		100	SA-6	33										
4	-4.0	83	SA-7	22										
		67	SA-8	100										
5	-5.0												End of drillhole: 5.03 m	
6	-6.0												Assumed Bedrock	
7	-7.0													
8	-8.0													
9	-9.0													
10	-10.0													



SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tillings
- Bedrock
- Gravel
- Sand
- Silt
- Clay
- Organics

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 3

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Immediately southwest of the fueling station

LOGGED BY: DD

NORTHING: _____

DATE DRILLHOLE STARTED: 19-Aug-04

EASTING: _____

DATE DRILLHOLE FINISHED: 19-Aug-04

GROUND ELEVATION: _____

DATE INSTRUMENTATION COMPLETED: 19-Aug-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details
						PL	M/C	LL	25	75	125			
0	0.0												Ground Surface	
0.46		42	Shelby Tube	SA-1	12								Sand and gravel (0.00 to 0.89m) Compact, dry to moist, brown sand and gravel; strong fuel odour.	
1.00	-1.0	83	Shelby Tube	SA-2 SA-3	12								Sand and gravel (0.89 to 1.22m) Compact, moist, black-grey sand and gravel; strong fuel odour.	
2.00	-2.0	50	Shelby Tube	SA-4 SA-5	11								Sand (1.22 to 1.52m) Stiff, moist, grey, fine to medium sand; strong fuel odour; black "oily" substance on outside of sample.	
3.00	-3.0	58	Shelby Tube	SA-6 SA-7 SA-8	26								Clay (1.52 to 1.98m) Stiff, moist to wet, grey clay; less fuel odour; black "oily" substance on outside of sample.	
4.00	-4.0	100	Shelby Tube	SA-9	21								Silt (1.98 to 2.29m) Stiff, moist to wet, grey silt and fine sand; trace organics; strong fuel odour; some black "oily" substance on outside of sample.	
5.00	-5.0	100	Shelby Tube	SA-10	24								Clay, silt, sand and gravel (2.29 to 2.64m) Stiff, wet, grey clay, some brown silt, sand and gravel; very little fuel odour.	
5.18	-5.18	50	Shelby Tube	SA-11	8								Silt (2.64 to 5.18m) Firm to stiff, wet, grey silt and fine sand; strong fuel odour.	
5.18	-5.18												End of drillhole: 5.18 m	
8.00	-8.00												Assumed Bedrock	

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tailings
- Bedrock
- Gravel
- Sand
- Silt
- Clay
- Organics

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 4

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: AK

NORTHING: N/A

DATE DRILLHOLE STARTED: 23-Nov-04

EASTING: N/A

DATE DRILLHOLE FINISHED: 23-Nov-04

GROUND ELEVATION: N/A

DATE INSTRUMENTATION COMPLETED: 23-Nov-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details
						PL	M/C	LL	25	75	125			
0	0.0												Ground Surface	
0.33		33	SA-1	12									Sand and Gravel Mostly Compact, dry to moist, brown sand and gravel; some fuel odour	
0.66		16	SA-2	8									Sand and Gravel Compact, moist, black sand and some gravel, charcoal-like properties; strong fuel odour	
1.00		30	SA-3A SA-3B	4									Silt Stiff, wet, grey silt with some fine sand; strong fuel odour	
1.33		58	SA-4	31										
1.66		100	SA-5	52										
3.66													End of drillhole: 3.66 m	

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tillings
- Bedrock
- Gravel
- Sand
- Silt
- Clay
- Organics

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 5

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: AK

NORTHING: N/A

DATE DRILLHOLE STARTED: 23-Nov-04

EASTING: N/A

DATE DRILLHOLE FINISHED: 23-Nov-04

GROUND ELEVATION: N/A

DATE INSTRUMENTATION COMPLETED: 23-Nov-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details
						PL	M/C	LL	25	75	125			
0	0.0												Ground Surface	
		42	Shelby Tube	SA-1	13								Sand and Gravel Compact, dry to moist, brown sand with some gravel; strong fuel odour	
1	-1.0	33	Shelby Tube	SA-2	6								Sand and Gravel Compact, moist, black sand and gravel, has charcoal-like properties; strong fuel odour	
		8	Shelby Tube	SA-3	7								Silt Stiff, moist to wet, grey silt, with some fine sand; strong fuel odour	
2	-2.0	50	Shelby Tube	SA-4	21									
		92	Shelby Tube	SA-5	27									
3	-3.0	83	Shelby Tube	SA-6	20									
4	-4.0	92	Shelby Tube	SA-7	20									
5	-5.0												End of drillhole: 4.27 m	

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tailings
- Bedrock
- Gravel
- Sand
- Silt

INSTALLATION SYMBOL

- Clay
- Organics
- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 6

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: AK

NORTHING: N/A

DATE DRILLHOLE STARTED: 23-Nov-04

EASTING: N/A

DATE DRILLHOLE FINISHED: 23-Nov-04

GROUND ELEVATION: N/A

DATE INSTRUMENTATION COMPLETED: 23-Nov-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	SPT N-Value (blows per foot) (100 Blows = Refusal)	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details
							PL	M/C	LL	25	75	125			
0.0														Ground Surface	
0.33		33	SA-1	17										Sand and Gravel Compact to loose, dry to moist, brown sand and gravel; strong fuel odour	Stick-up is 0m
1.0	-1.0	0													
1.42		42	SA-2A	2										Sand and Gravel Compact, moist, black sand with some gravel; strong fuel odour	Water level
1.58		58	SA-2E	24											
2.58		58	SA-3	24										Silt Stiff, wet, grey silt, with some fine sand; strong fuel odour	
3.0	-3.0	100	SA-4	28											
3.5		100	SA-5	22										End of drillhole: 4.37 m	
4.0	-4.0	100	SA-6	19											
5.0	-5.0														
6.0	-6.0														
7.0	-7.0														
8.0	-8.0														
9.0	-9.0														
10.0	-10.0														

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tailings
- Bedrock
- Gravel
- Sand
- Silt

INSTALLATION SYMBOL

- Clay
- Organics
- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 7

PROJECT: Ontario Northland - North Bay Property

PROJECT NO.: NB102-00099/2

DRILLHOLE LOCATION: Approx. 30m southwest of the fueling station

LOGGED BY: AK

NORTHING: 5128040m

DATE DRILLHOLE STARTED: 23-Nov-04

EASTING: 619164m

DATE DRILLHOLE FINISHED: 23-Nov-04

GROUND ELEVATION: N/A

DATE INSTRUMENTATION COMPLETED: 23-Nov-04

Depth (m)	Elevation	Sample Recovery (%)	Sample Type	Sample Number	SPT N-Value	SPT N-Value (blows per foot) (100 Blows = Refusal) 12.5 25 37.5	Atterberg Limits (%)			Field Vane Shear Strength			Graphic Log	STRATIGRAPHY Description	Drill Comments and Instrumentation Details
							PL	M/C	LL	25	75	125			
0	0.0													Ground Surface	
0.3		13	Shelby Tube	SA-1	22									Sand and Gravel Compact, dry to moist, brown sand and gravel; strong fuel odour	
1.0	-1.0	17	Shelby Tube	SA-2	9								Sand and Gravel Compact, moist, black sand and gravel; strong fuel odour		
2.0	-2.0	17	Shelby Tube	SA-3	6								Silt Stiff, wet, grey silt and fine sand; strong fuel odour		
2.5	-2.5	83	Shelby Tube	SA-4	25										
3.0	-3.0	100	Shelby Tube	SA-5	39										
3.5	-3.5	58	Shelby Tube	SA-6	23										
4.0	-4.0	92	Shelby Tube	SA-7	11										
4.23	-4.23												End of drillhole: 4.23 m		

SAMPLE TYPE

- Shelby Tube
- Split Spoon (SPT)
- Rock Core
- Auger Sample

GRAPHIC LOG SYMBOL

- Tailings
- Bedrock
- Gravel
- Sand
- Silt
- Clay
- Organics

INSTALLATION SYMBOL

- Bentonite Seal
- Filter Sand
- Grout
- Native Fill
- Concrete

Figure 8



PRIVATE UTILITY LOCATE REPORT

Primary Locate Sheet

Locate Sheet 1 of

Job # 24-1693

Sub # 2729

73 Sinclair Blvd., Brantford, ON N3S 7X6

Toll Free:855-586-3545

info@landsharkgroup.ca

Customer: Englobe - Thunder Bay	Site Address: 915 McIntyre Street East	
Contact Name: Englobe - Thunder Bay	Phone: 8073571289	City: North Bay
Email: Jonathan.Morrow@EnglobeCorp.com	Depth:	Requestor Type: OTHER
PO #:	Type of Work: Private Locates	

Utilities Located: Private

Work Description: Bore Holes Site plan is provided. Meeting Sharon on site for 10am.

NOTES/WARNINGS: CUSTOMER MUST OBTAIN PUBLIC UTILITY CLEARANCES PRIOR TO EXCAVATION

COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

- Proposed Excavation
- Temporary Survey Markings
- Electric power lines, cables, conduit & lighting cables
- Gas, oil, steam, petroleum or gaseous materials
- Communications, alarm or signal lines, cables or conduit
- Potable water
- Reclaimed water, irrigation & slurry lines
- Sewers & drain lines

Important Notice to Excavator:

**POSSIBLE
UNTRACEABLE
/ ABANDONED
UTILITIES IN
LOCATED
AREA**

POSSIBLE OLD GAS LINES IN AREA WAS TOLD BY STAFF ONSITE THERE ARE NO LONGER IN USE THEY WERE UNLOCATEABLE

Comments to Excavator:

Utility locate Methods Used: Active Passive Inductive Sweep Private Detectable Services: As above None

Sewer Lines: Traced Not Traced Inverts Marked Where Visible GPR Conquest

LIMITATIONS / SPECIAL INSTRUCTIONS: INDICATED LIMITATIONS ELEVATE RISK OF STRIKING A BURIED UTILITY. THE CLIENT REPRESENTATIVE IS TO NOTIFY ALL INVOLVED WITH (INCLUDING AND NOT LIMITED TO ALL FIELD STAFF, PROJECT MANAGERS, THEIR CLIENT AND/OR PROPERTY OWNER OF THE SUBJECT PROPERTY IF THE SAME). A "NO" CHECKED INDICATES A LIMITATION WHICH TRANSLATES INTO AN INCREASED RISK OF NOT FINDING ALL BURIED UTILITIES WITHIN THE WORK AREA.

As-Built or Utility Drawing requested from: _____

Site Plan (showing work area): Yes No As-Built Utility Drawings: Yes No Building Access: Yes No N/A Ground Snow Covered: Yes No

LIST ALL OTHERS:

Start Time: 2024-05-22 10:21:03AM

Inversion Collection: 0 hrs

Finish Time: 2024-05-22 11:40:39AM

Per diem: 0 days

THE CLIENT ACKNOWLEDGES THAT ANY PUBLIC UTILITY OWNED SERVICES WITHIN THE LIMITS OF THIS LOCATE, MARKED BY LANDSHARK LOCATES ARE FOR SURVEY PURPOSES ONLY AND REQUIRE PUBLIC LOCATES. BY SIGNING BELOW, THE CLIENT AGREES TO ALL THE TERMS AND CONDITIONS AND LIMITATIONS ON ALL PAGES AND REVERSE OF THE LOCATE REPORTS.

Located By: Adam T.

Send to Emails:

Completion Date & Time: 22-May-2024

A copy of the Primary Locate Sheet and the Auxiliary Locate Sheet must be on site and in the hands of the machine operator during the work operations. In the event that sketch and markings do not coincide, a new locate must be obtained.



PRIVATE UTILITY LOCATE REPORT

Auxiliary Locate Sheet

73 Sinclair Blvd., Brantford, ON N3S 7X6
 Toll Free: 855-586-3545
 info@landsharkgroup.ca

Locate Sheet 2 of

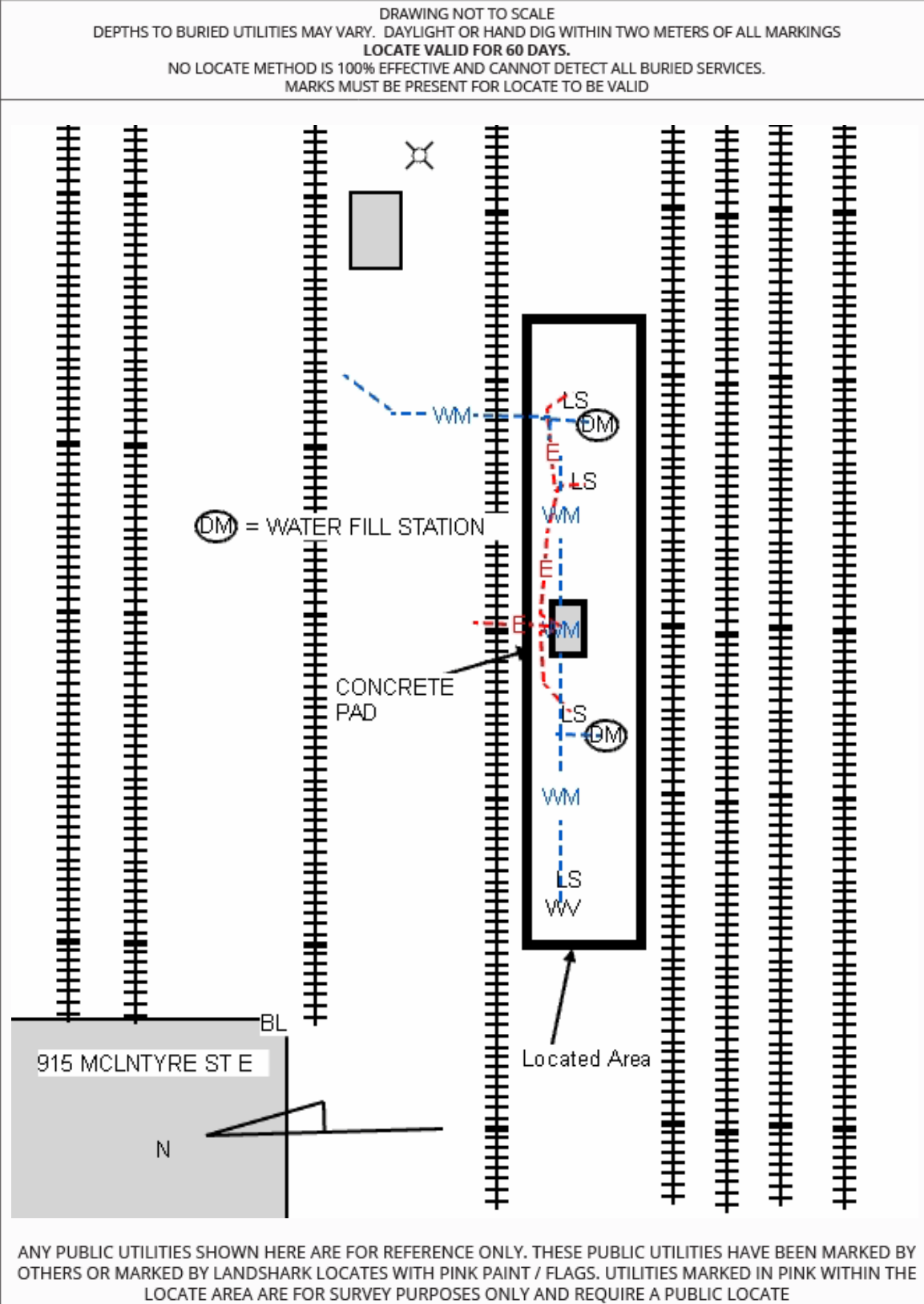
Job # 24-1693

Sub # 2729

From: WITH IN CONCRETE PAD To:

From: To:

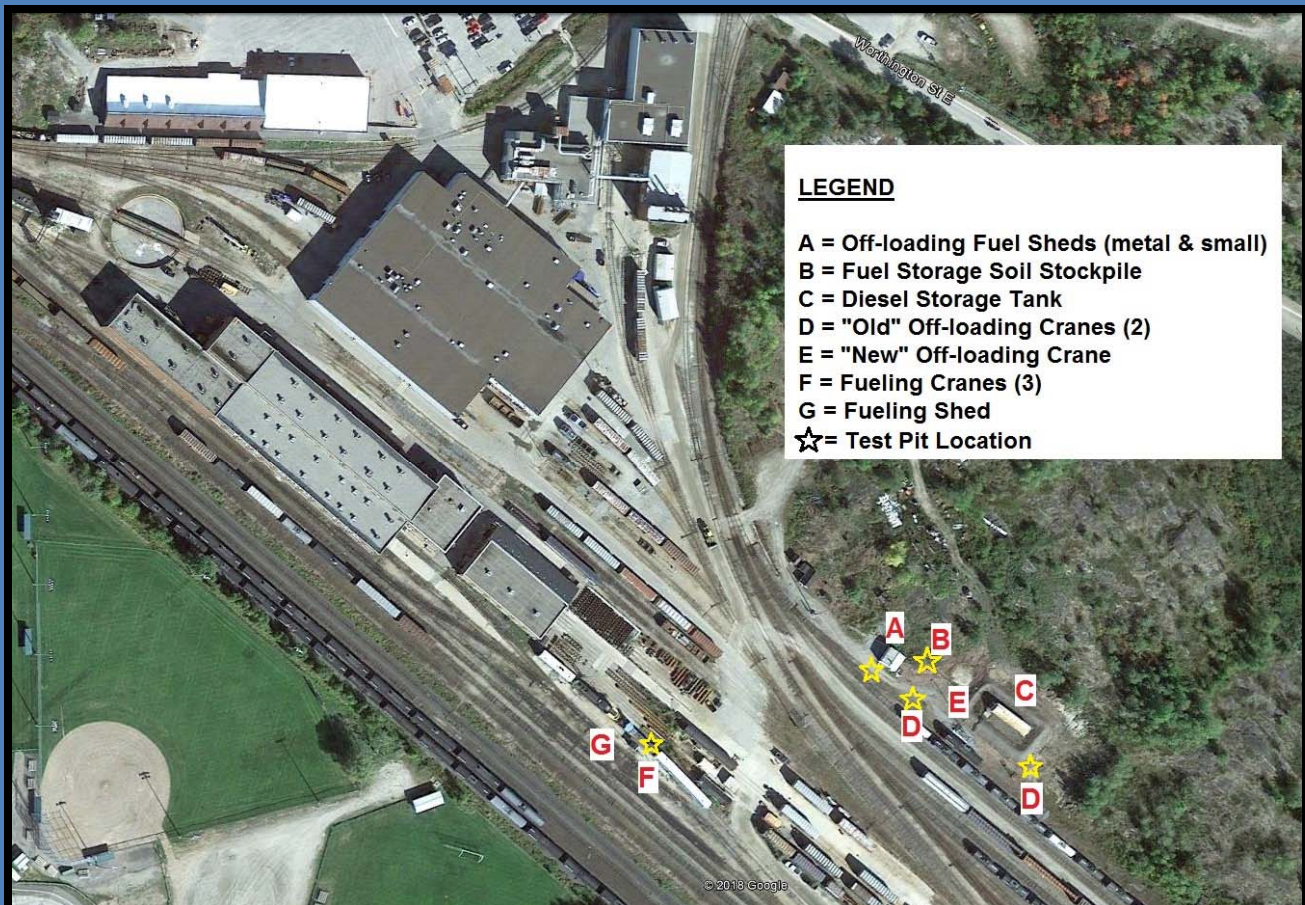
LEGEND	
BORE HOLE / TEST PIT	⊕
PROPERTY LINE	PL
BOLLARD	B
POST INDICATOR VALVE	PIV
CURB LINE	CL
ROAD EDGE	RE
BUILDING LINE	BL
RAILWAY	++++
SIDEWALK	SW
HYDRO POLE	HP
LIGHT STANDARD	LS
MANHOLE	⊠
CATCH BASIN	⊞
FIRE HYDRANT	○ FH
TRANSFORMER	FH ⊠
VAULT	V
WATER VALVE	WV
WATER	-W-
HYDRO	-H-
GAS	-G-
ELECTRICAL	-E-
COMMUNICATION	-C-
FIBRE OPTIC	-FO-
SPRINKLER	-SP-
SANITARY	-SAN-
STORM	-STM-
UNKNOWN TYPE	-?-
KIOSK	K
OVER HEAD	OH
BELL PEDESTAL	⊠
GAS MAIN	-GM-
GAS SERVICE	-GS-
WATER SERVICE	-WS-
WATER MAIN	-WM-
HYDRO SERVICE	-HS-
CABLE TV	-CATV-
BELL	-B-
OVERHEAD HYDRO	OH
FENCE LINE	-X-X-X-
UNKNOWN UTILITY	???
ROGERS / COGECO	TVFO
BELL FO	BFO
WELL	⊙



June 2019

DESIGNATED SUBSTANCES SURVEY REPORT

**FUELING FACILITY
ONTARIO NORTHLAND REMANUFACTURING AND REPAIR CENTRE
916 MCINTYRE STREET EAST
NORTH BAY, ONTARIO**



Prepared by:

THOMAS CONTRACTING

Project No. TC-201458

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THOMAS CONTRACTING

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Callander, Ontario
POH 1H0

PHONE : (705) 499 – 8006
FAX : (705) 752 – 2536

Reference: TC - 201458

June 25, 2019

ONTARIO NORTHLAND

555 Oak Street East
North Bay, ON
P1B 8L3

ATTENTION: Jonathan Boese – Engineering Assistant – Mechanical

Dear Sirs:

**DESIGNATED SUBSTANCES SURVEY
Fueling Facility Areas
Ontario Northland Remanufacturing and Repair Centre
916 McIntyre Street East
North Bay, Ontario**

1.0 INTRODUCTION

Thomas Contracting was commissioned by the Ontario Northland Transportation Commission (ONTC) to complete a designated substances survey (DSS) of their Remanufacturing and Repair Centre's Fueling Facility areas located at 916 McIntyre Street East, North Bay, Ontario. The objective of this study was to determine whether any designated substances, as defined under the Ontario Occupational Health and Safety Act, were present at each of the fueling structures (see study area below) prior to possible up-coming renovation work. This survey also includes surface soil investigation for hazardous materials / designated substances at each of the 5 fueling structures.

Eleven substances have been "designated" in Ontario - acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride. Mould and PCB containing materials are also harmful to the environment if handled improperly and therefore are included in our study.

The Ontario Occupational Health and Safety Act requires that a list of all designated substances at a project site be provided to all bidders at the tendering stage. A Designated Substance Survey (DSS) identifies the designated substances present, their locations and concentrations. This information allows contractors involved in demolition or renovation activities to take appropriate steps to control exposure of workers and the general public to the designated substances that are present.

This survey satisfies requirements of the Occupational Health and Safety Act with regards to the presence / absence of designated substances identified within this report.

The study area, methodology and findings are outlined in the sections, which follow.

2.0 STUDY AREA

2.1 Above Ground Structures

The study area under this assessment consisted of five (5) separate above ground fueling structures (see photos 1 to 7 in Appendix 'A') located on the subject property as follows.

1. Fuel Off-loading Sheds (2)
2. Fuel Storage Tank
3. Fuel Off-loading Cranes (3)
4. Fueling Cranes (2)
5. Fueling Area Shed

2.2 Surface Soil Sampling

The scope of this DSS assessment also included surface soil sampling spot check (client determine) around the each of the above noted five fueling structures for arsenic, lead, mercury, hydrocarbons (PHC F1 to F4) and BTEX, it does not include further surface or any subsurface soil investigations/testing (ie. underground holding/storage tanks or soil/water site contamination) of the above noted fueling structures at the Ontario Northland Remanufacturing and Repair Centre.

Note:

- Asbestos and Lead paint samples were evaluated under “Ontario Regulation 490/09”
- Aarsenic, lead and mercury soil samples were evaluated under "CCME - Soil Quality Guidelines for the Protection of Environmental and Human Health" for Industrial land use.
- Hydrocarbon soil samples were evaluated under “CCME – Canada-wide Standard for Petroleum Hydrocarbons (PHC CWS) in Soil” for Industrial land use.

3.0 STUDY METHODOLOGY

In June 2019, Thomas Contracting personnel conducted the fieldwork portion of the DSS assessment of the fueling structures noted above, focusing primarily on asbestos-containing materials, lead painted surfaces and mercury containing materials (thermostatic controls and fluorescent light tubes).

Access to suspected designated substances was made following industry-standard, testing protocols. All collected samples were subsequently labeled and the retrieval location(s) identified. All collected samples of suspected asbestos-containing material, lead-containing paint and hydrocarbons were forwarded to our laboratory subconsultant for positive identification and content levels of the designated substance(s).

4.0 ASBESTOS-CONTAINING MATERIALS (ACM's)

The DSS resulted in the retrieval of nine (9) representative samples of potential asbestos-containing material (7 of which required testing under Ont. Reg. 278/05). The potential ACM sampled consisted of exterior caulking and roofing shingles. All samples were submitted to our laboratory sub-consultant (Lex Scientific Inc., Ontario) for PLM bulk analysis with photos of each sample material and laboratory transcripts of the findings presented in Appendix 'A'.

A summary of sample locations and type of building material is presented in Table 1 (below) with the raw laboratory results and photos given in Appendix 'A'.

Table 1
Summary of Asbestos Bulk Sample Results

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
ONR – 3	8	Fuel Off-Loading Shed (metal)	Exterior Caulking	1 % Chrysotile
ONR – 5	9	Small Fuel Off-Loading Shed	Roofing Shingles	None Detected
ONR – 5a	-	Small Fuel Off-Loading Shed	Roofing Shingles	None Detected
ONR – 5b	-	Small Fuel Off-Loading Shed	Roofing Shingles	None Detected
ONR – 12	10	Fuel Loading Shed	Roofing Shingles	None Detected
ONR – 12a	-	Fuel Loading Shed	Roofing Shingles	None Detected
ONR – 12b	-	Fuel Loading Shed	Roofing Shingles	None Detected

4.1 Asbestos Findings

Based on our site assessment and laboratory results, the only asbestos-containing material observed and confirmed at the 5 fueling structures is exterior caulking used on the metal Off-Loading Fuel Shed.

Should future activities (demolition/renovation) occur within the metal Off-Loading Fuel Shed which would disturb the asbestos-containing exterior caulking noted in this report, Thomas Contracting recommends that the affected material(s) be removed prior to these activities. This work must be carried out under a Type 1 removal operation as outlined in R.R.O 2005, Reg. 278, Regulation respecting Asbestos on Construction Projects and in Building and Repair Operations.

5.0 LEAD-CONTAINING BUILDING MATERIALS

The survey resulted in the retrieval of ten (10) representative samples of paint observed within/on the 5 fueling structures under this DSS. These paint samples were submitted to our laboratory sub-consultant (Caduceon Environmental Laboratories, Ottawa, Ontario) for follow-up lead analysis. Photo of the sampled paint(s) and the laboratory transcript of the findings are presented in Appendix 'B'.

A summary of sample location, surface paint colour and lead content is presented in Table 2 (below).

Table 2
Summary of Paint Sample Result

Sample No.	Photo No. <i>(Appendix 'B')</i>	Location	Sample Description	Lead Content (µg/g)
ONR – 1	11	Off-loading Fuel Shed (metal)	Paint on Pipes and Tanks (surface colour = grey)	35000
ONR – 2	12		Exterior Wall & Roof Paint (surface colour = white)	46600
ONR – 4	13	Pipes between Storage Tank and Off-loading Fuel Shed	Paint on Pipes (surface colour = black)	44500
ONR – 6	14	“Old” Off-loading Fuel Crane	Paint on Structure (surface colour = white)	38000
ONR – 7	15	“New” Off-loading Fuel Crane	Paint on Structure (surface colour = light grey)	19
ONR – 8	16	Stairway between Storage Tank and Off-loading Crane	Paint on Structure (surface colour = black)	448
ONR – 9	17	Storage Tank	Paint on Structure (surface colour = white)	10
ONR – 10	18	Fueling Crane	Paint on Structure (surface colour = white)	4250
ONR – 11	19	Fueling Crane	Paint on Structure (surface colour = black)	5700
ONR – 13	20	“New” Off-loading Fuel Crane	Paint on Structure (surface colour = dark grey)	< 5

5.1 Lead Paint Definition

In absence of a Canadian regulated definition of what constitutes a lead-based paint, the “Lead Guideline for Construction, Renovation, Maintenance or Repair”, issued in October 2014 by the Environmental Abatement Council of Ontario (EACO) was followed.

Term	Definition	Guideline Requirements
<i>Low-level lead paints and surface coatings</i>	<i>Paint or surface coating containing less than or equal to 0.1% lead by dry weight (1000 µg/g, mg/kg, ppm).</i>	<i>If these materials (and the surfaces to which they are applied) are disturbed in a non-aggressive manner, performed using normal dust control procedures and are completed so that the TWA for PNOS is not exceeded, then worker protection from the inhalation of lead is not required. General health and safety precautions must still be implemented, which may include, in part, prohibiting eating, drinking, smoking and chewing in the work area, implementing dust suppression techniques and washing facilities for workers to wash hands and face.</i>
<i>Lead-containing paints and surface coatings</i>	<i>Paint or surface coating containing greater than 0.1% lead by dry weight (1000 µg/g, mg/kg, ppm) and less than 0.5% lead by dry weight (5000 µg/g, mg/kg, ppm).</i>	<i>Tasks performed that disturb these materials must be completed in accordance with the Classifications of Work Operations (in Section 7) and corresponding procedures (in Section 8). Alternatively, a hygiene or exposure assessment can be performed to determine procedures that are required.</i>
<i>Lead-based paints and surface coatings</i>	<i>Paint or surface coating containing equal to or greater than 0.5% lead by dry weight (5000 µg/g, mg/kg, ppm).</i>	<i>Tasks must always be completed in accordance with the procedures listed in the Classifications of Work Operations (in Section 7) and corresponding procedures (in Section 8). Alternatively, a hygiene or exposure assessment can be performed to determine procedures that are required.</i>

5.2 Lead Findings

Based on our site assessment and laboratory results, the following lead findings are presented in Table 4 (below).

Table 3
Summary of Lead Findings

Building / Structure	Lead Findings
<i>Off-loading Fuel Shed</i>	<ul style="list-style-type: none"> • <i>Paint on pipes and tanks (grey) inside the building as well as exterior wall and roof paint (white) observed on the building are both classed as <u>Lead-based paint</u>.</i>
<i>Pipes between Storage Tank and Off-loading Fuel Shed</i>	<ul style="list-style-type: none"> • <i>Paint observed on pipes and structures (black) is classed as <u>Lead-based paint</u>.</i>
<i>“Old” Off-loading Crane</i>	<ul style="list-style-type: none"> • <i>Paint observed on pipes and structures (white) is classed as <u>Lead-based paint</u>.</i>

<p>“New” Off-loading Crane</p>	<ul style="list-style-type: none"> • Paint observed on the structure (light grey and dark grey) is classed as <u>Low-level lead paint</u>.
<p>Stairway between Storage Tank and Off-loading Crane</p>	<ul style="list-style-type: none"> • Paint observed on the structure (black) is classed as <u>Low-level lead paint</u>.
<p>Storage Tank (Diesel)</p>	<ul style="list-style-type: none"> • Paint observed on the structure (white) is classed as <u>Low-level lead paint</u>.
<p>Fueling Crane</p>	<ul style="list-style-type: none"> • Paint observed on the structure (white) is classed as <u>Lead-containing paint</u>. • Paint observed on the structure (black) is classed as <u>Lead-based paint</u>.

Should future activities (demolition/renovation) occur within the buildings or structures noted above which would disturb the lead materials noted in this report, Thomas Contracting recommends that the affected material(s) be removed prior to these activities. This work should be carried out as outlined in “Lead Guideline for Construction, Renovation, Maintenance or Repair”, issued in October 2014 by the Environmental Abatement Council of Ontario (EACO).

5.3 Lead Precautions

Prior to any renovations or demolition activities that may disturb materials identified to contain lead of any concentration, precautions must be taken as described in Ontario Regulation 213/91 as amended, Regulations for Construction Projects - made under the Occupational Health and Safety Act. This may include conducting an assessment of the potential exposure of airborne lead by a qualified person.

Exposure to lead-containing materials is regulated under the Revised Regulation of Ontario 843/90 as amended, Regulation respecting Lead - made under the Occupational Health and Safety Act including disposal of such material Ontario Regulation 347/90 Schedule 4 – Leachate Quality Criteria (Acceptable Lead Concentrations of < 5.0 mg/l). Care must be taken to prevent lead-containing particles from becoming airborne during the disturbance of lead-containing surfaces (i.e., during renovation or demolition projects). All lead abatement work must follow procedures outlined in both the “Guideline for Lead on Construction Projects”, issued in September 2004 by the Occupational Health and Safety branch of the Ministry of Labour and the “Lead Guideline for Construction, Renovation, Maintenance or Repair”, issued in October 2014 by the Environmental Abatement Council of Ontario (EACO).

6.0 SILICA

Although not sampled under this study, it is our opinion that free crystalline silica (common construction sand) may be present a component of concrete, mortar, brick, masonry, ceramics, granite, slate, stone, asphalt, etc., used in the construction of the building.

Precautions must be taken to prevent silica-containing particles from becoming airborne during the disturbance of silica-containing surfaces, such as during renovation or demolition projects. Exposure to airborne silica is regulated under the Revised Regulation of Ontario. 845/90 as amended, Regulation respecting Silica - made under the Occupational Health and Safety Act. All work being carried with silica containing materials should be conducted following the Guide Silica on Construction Projects issued September 2004 by the Occupational Health and Safety branch of the Ministry of Labour. Silica waste must be handled and disposed of according to the Revised Regulation of Ontario 347/90 as amended - made under the Environmental Protection Act.

7.0 OTHER DESIGNATED SUBSTANCES

7.1 Mercury

No source was identified. Mercury is a naturally occurring metal. At room temperature it is a shiny, silver coloured odourless liquid. When heated it becomes a colourless, odourless gas. Mercury can be found in fluorescent light tubes, electrical switches, thermostats, thermometers, dental fillings, certain batteries and in some manufacturing processes.

7.2 Acrylonitrile

No source was identified. Acrylonitrile or CAN (also known as vinyl cyanide) is an explosive, flammable liquid used in the manufacture of acrylic fibres, robber-like materials and pesticide fumigants.

7.3 Arsenic

No source was identified. Arsenic is used in metallurgy for hardening copper, lead and alloys, in pigment production, in the manufacture of certain types of glass, in insecticides, fungicides and rodenticides, as a by-product in the smelting of copper ores, and as a dopant material in semiconductor manufacturing.

7.4 Benzene

No source was identified. Benzene or benzol is a colourless liquid. It is used as an intermediate in the production of styrene, phenol, cyclohexane, and other organic chemicals, and in the manufacture of detergents, pesticides, solvents, and paint removers. It is also found in gasoline.

7.5 Coke Oven Emissions

Not applicable for the surveyed site.

7.6 Ethylene Oxide

No source was identified. Ethylene oxide is a colourless gas liquefying below 12°C. It is used generally as a fumigant and sterilizing agent for medical equipment.

7.7 Isocyanates

No source was identified. Isocyanates (HDI, MDI and TDI) are used in the production of polyurethane and as an elastomer in casting compounds, mastics, and textile coatings (IPDI).

7.8 Vinyl Chloride

No source was identified. Vinyl chloride, also known as chloroethylene, is a colourless gas but is usually handled as a liquid under pressure. It is used in the production of PVC resins and in organic synthesis.

8.0 SURFACE SOIL SAMPLING

8.1 Fieldwork

The scope of this spot check surface soil sampling involved sampling around the each of the above noted five fueling structures (see drawing in Appendix 'D' for location of sampling pits) for arsenic, lead, mercury, hydrocarbons (PHC F1 to F4) and BTEX. Fieldwork was conducted on June 7, 2019 by our laboratory sub-consultant (Near North Laboratories Inc., North Bay, Ontario) with their field report attached in Appendix 'C'.

8.2 Lab Results

Lab results (attached in Appendix 'D') of each substance were evaluated under the following regulations/guidelines.

- Arsenic, lead and mercury soil samples were evaluated under "CCME - Soil Quality Guidelines for the Protection of Environmental and Human Health" for Industrial land use.
- Hydrocarbon soil samples were evaluated under "CCME – Canada-wide Standard for Petroleum Hydrocarbons (PHC CWS) in Soil" for Industrial land use.

8.3 Findings

Based on our field observations, lab results and the above noted evaluation criteria the following findings are given.

- **Arsenic** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed arsenic levels below the CCME guideline of 12 mg/kg for industrial land use.
- **Lead** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed lead levels below the CCME guideline of 600 mg/kg for industrial land use.
- **Mercury** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed mercury levels below the CCME guideline of 50 mg/kg for industrial land use.

- **Hydrocarbons**
 - **Benzene** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed no detectable benzene levels.
 - **Toluene** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed toluene levels below the CCME guideline of 0.37 mg/kg for coarse surface soil in industrial land use.
 - **Ethylbenzene** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed ethylbenzene levels below the CCME guideline of 0.082 mg/kg for coarse surface soil in industrial land use.
 - **Xylenes** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed xylene levels below the CCME guideline of 11 mg/kg for coarse surface soil in industrial land use.
 - **F1 Hydrocarbons (gasoline)** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed no detectable F1 Hydrocarbons levels.
 - **F2 Hydrocarbons (diesel)** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed F2 Hydrocarbons levels below the CCME guideline of 260 mg/kg for coarse surface soil in industrial land use.
 - **F3 Hydrocarbons (diesel/oils/grease)** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed F3 Hydrocarbons levels below the CCME guideline of 1700 mg/kg for coarse surface soil in industrial land use.
 - **F4 Hydrocarbons (diesel/oils/grease)** – All five (5) surface soil samples obtained at each of the 5 fueling structures revealed F4 Hydrocarbons levels below the CCME guideline of 3300 mg/kg for coarse surface soil in industrial land use.
- **Absorbent pad from concrete floor in Off-loading Fuel Shed (metal)** – Testing was conducted on the absorbent pad to determine the existing type of hydrocarbon contaminant present on the concrete floor. Lab results reveal that the main hydrocarbon contaminant present is diesel fuel (F2 & F3). Note. Absorbent pad was saturated to the point that free product could be produced when squeezed.

9.0 **SUMMARY**

A designated substances survey (DSS) of the Fueling Facility (5 structures) at the ONTC Remanufacturing and Repair Centre located at 916 McIntyre Street East, North Bay, Ontario, confirmed the presence of the following:

- Asbestos-containing building material (ACM's).
- Lead paint.
- Possible silica in concrete.
- High levels of hydrocarbons including free product within the metal Off-loading Fuel Shed.

10.0 **RECOMMENDATIONS**

10.1 **Asbestos-containing Material (ACM's)**

Based on our field observations, the only identified ACM was exterior caulking on the metal Off-loading Fuel Shed. This caulking is non-friable and does not pose a health hazard in its present state.

Should repair, removal or disposal of the asbestos-containing exterior caulking on the metal Off-loading Fuel Shed be undertaken, all work must be performed in accordance with Ont. Reg. 278, "Regulation respecting Asbestos on Construction Projects and in Building and Repair Operations" and all applicable Federal and Provincial statutes as noted in our report.

10.2 **Lead-containing Paints**

Based on our observations, the identified lead paints do not pose a health hazard in their present state. However, should removal and disposal of any lead-containing paint be undertaken, work should be performed in accordance with applicable lead abatement guidelines including Federal and Provincial statutes as noted in our report.

10.3 Silica-containing Materials

Based on our observations, the identified Silica - containing materials do not pose a health hazard in their present condition. All maintenance, removal and disposal of any Silica-containing materials must be performed in accordance with applicable Federal and Provincial statutes as noted in our report.

10.4 Hydrocarbons

Based on our observations, the identified high levels of hydrocarbons (diesel fuel) including free product within the metal Off-loading Fuel Shed could pose a health hazard in their present condition. Thomas Contracting recommends that until such time that a clean-up of all free product can be completed personal enter the shed shall don personal protection equipment (PPE) ie. respirator, rubber gloves, eyewear..etc... prior to entry.

11.0 LIMITATIONS AND WARRANTY

- This report is for the exclusive use of the client, their agents, and is neither an endorsement nor condemnation of the subject property.
- Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such parties. Thomas Contracting accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. In particular, any contractors bidding on site demolition or renovation work should not rely solely upon the present report for volume or quantity estimates, and should satisfy themselves of the exact quantities and conditions encountered on-site before bidding or initiating any project work, and adapt the appropriate work practices needed to comply with the applicable Federal / Provincial codes and regulations. Proper, detailed, tender packages should be prepared and supplied to contractors prior to the initiation of any renovation or demolition activities.
- The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by qualified professionals currently practicing in this area of environmental assessment. No other warranty, expressed or implied, is made.
- The findings contained in this report are based upon conditions as they were observed at the time of investigation. No assurance is made regarding changes in conditions subsequent to the time of the investigation.
- Please note that the above survey was limited to the extent of the visual observation and discrete samples collected. Inaccessible areas could not be investigated, and should renovation / demolition work encounter conditions not reported in this document, Thomas Contracting should be retained to provide comments and guidelines on how to proceed.
- Some findings contained in this report may be based upon information provided by occupants or employees. No guarantee is made regarding the accuracy of this information. All attempts have been made to independently verify the accuracy of such information unless specifically noted in our report.
- If new information is developed in future work, Thomas Contracting should be contacted to re-evaluate the conclusions of this report and to provide amendments as required.

12.0 CLOSURE

We trust this report meets your current requirements. Should you have any questions in this regard or require further clarification, please do not hesitate to contact the undersigned at this office.

Yours truly,

Thomas Contracting



Grant Johnson
Manager Environmental Services

APPENDIX 'A'
Asbestos Lab Transcripts
&
Sample Photos



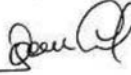
SOLUTIONS
 FOR A WORKING WORLD

CERTIFICATE OF ANALYSIS

Company:	Thomas Contracting	Report Date:	14-Jun-19
Contact:	Mr. Grant Johnson	Analysis Date:	12-Jun-19
Client Address:	72 Ninovan Road, CALLANDER, ON	Received Date:	11-Jun-19
Client Reference:	DSS - ONR Fuel	LEX Project Number:	08191193
Sampling Date:	05-Jun-19	Number of Analyses:	7


Analysis Requested Bulk Asbestos by PLM Page 1 of 2

Analysis was performed in accordance with the method EPA/600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials adopted in Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations - made under the Occupational Health and Safety Act Ontario Regulation 278/05. LEX Scientific Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP 101949) by the National Institute of Standards and Technology for analysis of bulk materials for asbestos.


 German Leal, B.Sc.
 Laboratory Manager

	Fibrous Asbestos Content %	Other Materials Content %
Client Sample: ONR-3	Asbestos Detected?	Yes
LEX Sample: 01	Chrysotile: 1	Cellulose: None Detected
Layers Analyzed: Caulking	Amosite: None Detected	MMVF: None Detected
Colour: Grey/Black	Crocidolite: None Detected	Other Fibres: None Detected
Description: Exterior Caulking around base of off-loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 99
	Comments: This sample meets the definition of "asbestos containing material" according to Ontario Regulation 278/05.	

Other Amphiboles: ac=actinolite, a=anthophyllite, t=tremolite, u=unidentified
 MMVF: Man Made Vitreous Fibres: Fibreglass, Min. Wool, Rockwool, Glasswool
 PLM - method detection limit is 0.1%


 Analyst


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291 Woodlawn Road West, Unit B-12 Guelph, Ontario N1H 7L6
 1.800.824.7082
 e-mail: admin@lexscientific.com Website: www.lexscientific.com

Company: Thomas Contracting LEX Project # 08191193 Page 2 of 2

		Fibrous Asbestos Content %	Other Materials Content %
Client Sample: <u>ONR-5</u>		Asbestos Detected? No	
LEX Sample: 04		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on Small off-loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		
Client Sample: <u>ONR-5a</u>		Asbestos Detected? No	
LEX Sample: 05		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on Small off-loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		
Client Sample: <u>ONR-5b</u>		Asbestos Detected? No	
LEX Sample: 06		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on Small off-loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		
Client Sample: <u>ONR-12</u>		Asbestos Detected? No	
LEX Sample: 07		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		
Client Sample: <u>ONR-12a</u>		Asbestos Detected? No	
LEX Sample: 08		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		
Client Sample: <u>ONR-12b</u>		Asbestos Detected? No	
LEX Sample: 09		Chrysotile: None Detected	Cellulose: 10
Layers Analyzed: Shingle		Amosite: None Detected	MMVF: 10
Colour: Black		Crocidolite: None Detected	Other Fibres: None Detected
Description: Shingle on loading fuel shed	Other Amphiboles: None Detected	Non Fibrous: 80	
	Comments: N/A		

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
 MMVF: Man Made Vitreous Fibres: Fibreglass, Min. Wool, Rockwool, Glasswool
 PLM - method detection limit is 0.1%


 Analyst

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PHOTO # 1
Fuel Off-loading Shed (metal)



PHOTO # 2
Fuel Off-loading Shed (small)



PHOTO # 3
"Old" Fuel Off-loading Cranes (2)



PHOTO # 4
"New" Fuel Off-loading Crane



PHOTO # 5
Fuel Storage Tank (Diesel)



PHOTO # 6
Fueling Shed



PHOTO # 7
Fueling Cranes (3)



PHOTO # 8
Sample # ONR 3 : Asbestos-containing exterior caulking
on fuel off-loading shed (metal). (1% chrysotile asbestos)



PHOTO # 9
Sample # ONR 5 : Non-asbestos tar roofing shingles
on small fuel off-loading shed.



PHOTO # 10
Sample # ONR 12 : Non-asbestos tar roofing shingles
on fueling shed.

APPENDIX 'B'
Lead Lab Transcripts
&
Sample Photos



CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B19-16873

Report To:

Thomas Contracting
 72 Ninovan Road,
 Callander ON P0H 1H0 Canada

Caduceon Environmental Laboratories

2378 Holly Lane
 Ottawa Ontario K1V 7P1
 Tel: 613-526-0123
 Fax: 613-526-1244

Attention: Grant Johnson

DATE RECEIVED: 11-Jun-19

JOB/PROJECT NO.: ONR-DSS

DATE REPORTED: 21-Jun-19

P.O. NUMBER: TC-201458

SAMPLE MATRIX: Paint Chips

WATERWORKS NO.

Parameter	Lead				
Units	µg/g				
R.L.	5				
Reference Method	EPA 6010				
Date Analyzed/Site	21-Jun-19/O				
Client I.D.	Sample I.D.	Date Collected			
ONR-1	B19-16873-1	05-Jun-19	35000		
ONR-2	B19-16873-2	05-Jun-19	46600		
ONR-4	B19-16873-3	05-Jun-19	44500		
ONR-6	B19-16873-4	05-Jun-19	38000		
ONR-7	B19-16873-5	05-Jun-19	19		
ONR-8	B19-16873-6	05-Jun-19	448		
ONR-9	B19-16873-7	05-Jun-19	10		
ONR-10	B19-16873-8	05-Jun-19	4250		
ONR-11	B19-16873-9	05-Jun-19	5700		
ONR-13	B19-16873-10	05-Jun-19	< 5		

Greg Clarkin, BSc., C. Chem
 Lab Manager - Ottawa District

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.



Photo # 11

Sample # ONR – 1 : Paint on Pipes and Tanks located within the Off-loading Fuel Shed (metal).
Deem to be Lead-based paint. (surface colour = grey)



Photo # 12

Sample # ONR – 2 : Exterior wall and roof paint located on the Off-loading Fuel Shed (metal).
Deem to be Lead-based paint. (surface colour = white)



Photo # 13

Sample # ONR – 4 : Exterior pipe paint located on pipes running between Storage Tank and Off-loading Fuel Shed.
Deem to be Lead-based paint. (surface colour = black)



Photo # 14

Sample # ONR – 6 : Paint on “Old” Off-loading Fuel Crane structure.
Deem to be Lead-based paint. (surface colour = white)



Photo # 15

Sample # ONR – 7 : Paint on “New” Off-loading Fuel Crane pipes.
Deem to be Low-level lead paint. (surface colour = light grey)



Photo # 16

Sample # ONR – 8 : Structural paint on stairway between Storage Tank and Off-loading Crane.
Deem to be Low-level lead paint. (surface colour = black)



Photo # 17

Sample # ONR – 9 : Structural paint on diesel Storage Tank.
Deem to be Low-level lead paint. (surface colour = white)



Photo # 18

Sample # ONR – 10 : Structural paint on Fueling Crane.
Deem to be Lead-containing paint. (surface colour = off white)



Photo # 19

Sample # ONR – 11 : Structural paint on Fueling Crane.
Deem to be Lead-based paint. (surface colour = black)



Photo # 20

Sample # ONR – 13 : Structural paint on Off-loading Fuel Crane.
Deem to be Low-level lead paint. (surface colour = dark grey)

APPENDIX 'C'

***Near North Laboratories Inc.
Field Report***



Environmental Services
• Accredited by CAEAL/SCC to ISO/IEC 17025 for specific tests
• Licensed by the Ontario Ministry of Environment for Specific Drinking Water Analyses
Unit 11-191 Booth Road, RR#5, North Bay, Ontario P1A 4K3
Phone (705) 497 0550 / Fax (705) 497 0549

Client Name:	Thomas Contracting
Contact Name:	Grant Johnson
Client Address:	72 Ninovan Road, East
	Callander, ON P0H 1H0

NNL received a request to collect surface soil samples:

Project:	ONR Rail Yard, Worthington Street East, North Bay	
NNL Job #:	118188	
Sample Date #:	June 7, 2019	Report Date: June 19, 2019
Lab#:	19F0488-453	
Sample Description:	Surface soils collected between 12" and 18" deep as per contractor's request; Sample sites were predetermined by project leaders	
Samplers:	Brenda McLay and Shannon McCarthy	
Weather:	Sunny, ~16 °C, slight breeze, no rain in the proceeding 24 hours	

Five soil samples were collected for Hydrocarbon (F1-F4+BETX) and metals testing (Mercury, Arsenic, Lead). The soil pit depths for these five samples were between 1 to 1.5 feet.

1. Lab#19F0448 Fuel Storage Shed (in front of door; pit ~ 1' deep; primarily sandy gravel)
2. Lab#19F0449 Fuel Storage Stockpile (primarily sand samples were collected and composited from 4 sides of pile ~ 1' deep and ~1' into pile. The pits were dug to expose the sand pile which was buried under varying depth of soil overburden (~3"- 8")
3. Lab#19F0450 North Offloading Crane (pit ~1' deep; primarily stony gravel)
4. Lab#19F0451 South Offloading Crane (pit ~1.5' deep; primarily sandy humus with water seepage observed at the bottom of this pit.
5. Lab#19F0452 Fueling Area East Side of Pad. The rails ran on the west side of the pad and the ground surrounding the rails was darkened adjacent to the pad.
6. Bulk sample - Lab#19F0453, of various fuel soaked absorbent pads was collected from the floor of the fuel shed in order to identify the type of fuel product in the shed.

Comments:

- There was no hydrocarbon odor detected nor free product observed at any of the soil sites.
- A paint-free stainless steel shovel, trowel and scoops were used for digging and sampling. These were cleaned and solvent rinsed before sampling and between sample sites to avoid cross-contamination.
- Samples were collected into laboratory prepared containers.
- See photos of sample sites. Attached is the statement of analytical results.

Should you have any questions or comments, please do not hesitate to contact us.

Best regards,

Brenda McLay,
Director



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Unit 11-191 Booth Road, RR#5, North Bay, Ontario P1A 4K3
Phone (705) 497 0550 / Fax (705) 497 0549

PHOTOS

Site 1 – Fuel Storage Shed and sampling pit





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Phone (705) 497 0550 / Fax (705) 497 0549

Site 2 – Stockpile beside Fuel Storage Shed



Stockpile North side



Stockpile East side





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Unit 11-191 Booth Road, RR#5, North Bay, Ontario P1A 4K3
Phone (705) 497 0550 / Fax (705) 497 0549

Stockpile South side



Stockpile West side



Compositing Stock Pile





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Site 3 – North Offloading Crane and sampling pit





**Near North
Laboratories Inc.**

Environmental Services

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Site 4 – South Offloading Crane and sampling pit





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Phone (705) 497 0550 / Fax (705) 497 0549

Site 5 – Fueling Area East Side of Pad and sampling pit





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• Licensed by the Ontario Ministry of Environment for Specific Drinking Water Analyses
Unit 11-191 Booth Road, RR#5, North Bay, Ontario P1A 4K3
Phone (705) 497 0550 / Fax (705) 497 0549

Version: April 21, 2016

**Near North Laboratories Inc. (NNL)
GENERAL TERMS AND CONDITIONS**

1. Near North Laboratories Inc. (NNL) does not accept liability for the collection/handling of samples; nor representation and custody of samples prior to submission to the laboratory; the only exception to this statement is for samples collected/handled/in custody of NNL staff from the time of sampling. Near North laboratories Inc.'s scope of liability extends to the field observations as witnessed and expressed in the report. NNL provides a sampling service with field observations and general reference to relative guidelines, standards and literature. NNL does not employ nor provide the opinion of a Certified Industrial or Occupational Hygienist; nor opinions or statements as per government agencies (e.g. MOL, MOHLTC). These services are to be further engaged separately by the client.
2. Prior to or at the time of submission, clients are advised to inform laboratory staff of any known or suspected hazardous properties pertaining to samples and samples are to be properly labeled with respect to the hazardous property. Material Safety Data Sheets are to be provided if available.
3. Near North Laboratories Inc. only performs testing and services as specified by clients in writing.
4. The Client understands and agrees that Near North Laboratories Inc. does not assume or undertake to discharge any duty or responsibility of the client to any other parties.
5. It is agreed that if Near North Laboratories Inc. should be found liable for any losses or damages attributable to the services provided, the liability shall be limited to and not exceed the amount of the fee paid by the Client for the services; this limit of liability may constitute the re-test / re-provision of the service or a refund of the fee paid.
6. Results relate only to the items tested and only to the standards / procedures indicated on the report.
7. Reports must not be copied in part, only in full
8. Reports are the property of the client
9. The name "Near North Laboratories Inc.", insignia, and corporate seals are not to be used by or on behalf of Clients under any circumstances.
10. Whenever performance by either party is delayed or prevented by means beyond the control of such party, such delay or prevention shall be excused and the time of performance hereunder shall be extended for the duration of the causative factor.



 **Environmental Services**

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Unit 11-191 Booth Road, RR#5, North Bay, Ontario P1A 4K3
Phone (705) 497 0550 / Fax (705) 497 0549

11. Near North Laboratories Inc. code of confidentiality is that information, data will not be communicated to a third party without the expressed permission of the Client EXCEPT in the case of regulated facilities under the SDWA in which adverse results will be communicated to appropriate authorities such as the Public Health Unit and the Ministry of Environment as per regulatory requirements.
12. Records will be kept, and not destroyed, for a minimum of 8 years. Regulatory records include all aspects of information regarding regulatory work including but not limited to bench sheets/raw data, certificate of analysis, final reports, exceedance notification and DWIS uploading. Records will be kept in accordance with section 13, Regulation 248/03 Drinking Water Testing Services.
13. Near North Laboratories Inc. reserves the right to subcontract samples to other laboratories as required. Samples will be subcontracted only to laboratories meeting accreditation and licensing requirements as outlined in NNL policy and governing legislation.
14. The Client agrees to pay within 30 days of the invoice date.
15. Payments not received within 30 days may be subject to a late payment charge on the unpaid balance of 1.5% per month.

APPENDIX 'D'

**Surface Soil Sampling
Lab Results**



Your Project #: JOB 118188
 Your C.O.C. #: 721868-01-01

Attention: Brenda McLay
 Near North Laboratories Inc
 Unit 11 - 191 Booth Rd
 RR 5
 North Bay, ON
 Canada P1A 4K3

Report Date: 2019/06/19
 Report #: R5761197
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9F9542
Received: 2019/06/12, 09:30

Sample Matrix: Soil
 # Samples Received: 6

Analyses	Quantity	Date		Laboratory Method	Reference
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2019/06/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	4	N/A	2019/06/15	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2019/06/18	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	5	2019/06/14	2019/06/16	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2019/06/14	2019/06/17	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric)	2	2019/06/18	2019/06/18	CAM SOP-00316	CCME PHC-CWS m
Strong Acid Leachable Metals by ICPMS	5	2019/06/15	2019/06/17	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2019/06/14	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods"



Your Project #: JOB 118188
Your C.O.C. #: 721868-01-01

Attention: Brenda McLay
Near North Laboratories Inc
Unit 11 - 191 Booth Rd
RR 5
North Bay, ON
Canada P1A 4K3

Report Date: 2019/06/19
Report #: R5761197
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9F9542

Received: 2019/06/12, 09:30

September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Hongmei Zhao (Grace)
Project Manager
19 Jun 2019 16:41:50

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Hongmei Zhao (Grace), Project Manager
Email: Grace.Zhao@bvlabs.com
Phone# (905)817-5734

=====

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total Cover Pages : 2
Page 2 of 13

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com



BV Labs Job #: B9F9542
 Report Date: 2019/06/19

Near North Laboratories Inc
 Client Project #: JOB 118188

RESULTS OF ANALYSES OF SOIL

BV Labs ID		JZA653	JZA654	JZA655	JZA656		
Sampling Date		2019/06/07 09:00	2019/06/07 09:30	2019/06/07 09:55	2019/06/07 10:05		
COC Number		721868-01-01	721868-01-01	721868-01-01	721868-01-01		
	UNITS	19F0448 - FUEL STORAGE SHED	19F0449 - STOCKPILE	19F0450 - NORTH OFFLOADING CRANE	19F0451 - SOUTH OFFLOADING CRANE	RDL	QC Batch

Inorganics							
Moisture	%	9.0	14	16	24	1.0	6176855
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

BV Labs ID		JZA657		
Sampling Date		2019/06/07 10:30		
COC Number		721868-01-01		
	UNITS	19F0452 - FUELING AREA	RDL	QC Batch

Inorganics				
Moisture	%	5.6	1.0	6176855
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BV Labs Job #: B9F9542
 Report Date: 2019/06/19

Near North Laboratories Inc
 Client Project #: JOB 118188

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

BV Labs ID		JZA653	JZA654	JZA655	JZA656		
Sampling Date		2019/06/07 09:00	2019/06/07 09:30	2019/06/07 09:55	2019/06/07 10:05		
COC Number		721868-01-01	721868-01-01	721868-01-01	721868-01-01		
	UNITS	19F0448 - FUEL STORAGE SHED	19F0449 - STOCKPILE	19F0450 - NORTH OFFLOADING CRANE	19F0451 - SOUTH OFFLOADING CRANE	RDL	QC Batch

Metals							
Acid Extractable Arsenic (As)	ug/g	4.0	ND	7.1	5.1	1.0	6179055
Acid Extractable Lead (Pb)	ug/g	46	5.0	150	180	1.0	6179055
Acid Extractable Mercury (Hg)	ug/g	ND	ND	0.24	ND	0.050	6179055

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 ND = Not detected

BV Labs ID		JZA657		
Sampling Date		2019/06/07 10:30		
COC Number		721868-01-01		
	UNITS	19F0452 - FUELING AREA	RDL	QC Batch

Metals				
Acid Extractable Arsenic (As)	ug/g	1.3	1.0	6179055
Acid Extractable Lead (Pb)	ug/g	11	1.0	6179055
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	6179055

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 ND = Not detected



BV Labs Job #: B9F9542
 Report Date: 2019/06/19

Near North Laboratories Inc
 Client Project #: JOB 118188

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		JZA653			JZA653		
Sampling Date		2019/06/07 09:00			2019/06/07 09:00		
COC Number		721868-01-01			721868-01-01		
	UNITS	19F0448 - FUEL STORAGE SHED	RDL	QC Batch	19F0448 - FUEL STORAGE SHED Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	0.020	6177081	ND	0.020	6177081
Toluene	ug/g	0.048	0.020	6177081	0.047	0.020	6177081
Ethylbenzene	ug/g	0.021	0.020	6177081	ND	0.020	6177081
o-Xylene	ug/g	0.038	0.020	6177081	0.036	0.020	6177081
p+m-Xylene	ug/g	0.064	0.040	6177081	0.064	0.040	6177081
Total Xylenes	ug/g	0.10	0.040	6177081	0.10	0.040	6177081
F1 (C6-C10)	ug/g	ND	10	6177081	ND	10	6177081
F1 (C6-C10) - BTEX	ug/g	ND	10	6177081	ND	10	6177081
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	65	10	6177276			
F3 (C16-C34 Hydrocarbons)	ug/g	300	50	6177276			
F4 (C34-C50 Hydrocarbons)	ug/g	ND	50	6177276			
Reached Baseline at C50	ug/g	Yes		6177276			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	101		6177081	98		6177081
4-Bromofluorobenzene	%	100		6177081	101		6177081
D10-Ethylbenzene	%	110		6177081	102		6177081
D4-1,2-Dichloroethane	%	102		6177081	99		6177081
o-Terphenyl	%	104		6177276			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected							



BV Labs Job #: B9F9542
 Report Date: 2019/06/19

Near North Laboratories Inc
 Client Project #: JOB 118188

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		JZA654			JZA654		
Sampling Date		2019/06/07 09:30			2019/06/07 09:30		
COC Number		721868-01-01			721868-01-01		
	UNITS	19F0449 - STOCKPILE	RDL	QC Batch	19F0449 - STOCKPILE Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	0.020	6177081			
Toluene	ug/g	0.022	0.020	6177081			
Ethylbenzene	ug/g	ND	0.020	6177081			
o-Xylene	ug/g	0.034	0.020	6177081			
p+m-Xylene	ug/g	ND	0.040	6177081			
Total Xylenes	ug/g	ND	0.040	6177081			
F1 (C6-C10)	ug/g	ND	10	6177081			
F1 (C6-C10) - BTEX	ug/g	ND	10	6177081			
F2-F4 Hydrocarbons							
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	ND	100	6182236	ND	100	6182236
F2 (C10-C16 Hydrocarbons)	ug/g	ND	10	6177276			
F3 (C16-C34 Hydrocarbons)	ug/g	60	50	6177276			
F4 (C34-C50 Hydrocarbons)	ug/g	70	50	6177276			
Reached Baseline at C50	ug/g	No		6177276			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	100		6177081			
4-Bromofluorobenzene	%	98		6177081			
D10-Ethylbenzene	%	109		6177081			
D4-1,2-Dichloroethane	%	101		6177081			
o-Terphenyl	%	103		6177276			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected							



BV Labs Job #: B9F9542
 Report Date: 2019/06/19

Near North Laboratories Inc
 Client Project #: JOB 118188

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		JZA655			JZA656		
Sampling Date		2019/06/07 09:55			2019/06/07 10:05		
COC Number		721868-01-01			721868-01-01		
	UNITS	19F0450 - NORTH OFFLOADING CRANE	RDL	QC Batch	19F0451 - SOUTH OFFLOADING CRANE	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	0.020	6177081	ND	0.020	6177081
Toluene	ug/g	0.087	0.020	6177081	0.12	0.020	6177081
Ethylbenzene	ug/g	0.023	0.020	6177081	0.050	0.020	6177081
o-Xylene	ug/g	0.066	0.020	6177081	0.17	0.020	6177081
p+m-Xylene	ug/g	0.078	0.040	6177081	0.16	0.040	6177081
Total Xylenes	ug/g	0.14	0.040	6177081	0.33	0.040	6177081
F1 (C6-C10)	ug/g	ND	10	6177081	ND	10	6177081
F1 (C6-C10) - BTEX	ug/g	ND	10	6177081	ND	10	6177081
F2-F4 Hydrocarbons							
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	800	100	6182236			
F2 (C10-C16 Hydrocarbons)	ug/g	24	10	6177276	ND	10	6177276
F3 (C16-C34 Hydrocarbons)	ug/g	350	50	6177276	99	50	6177276
F4 (C34-C50 Hydrocarbons)	ug/g	330	50	6177276	ND	50	6177276
Reached Baseline at C50	ug/g	No		6177276	Yes		6177276
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	100		6177081	99		6177081
4-Bromofluorobenzene	%	100		6177081	97		6177081
D10-Ethylbenzene	%	105		6177081	101		6177081
D4-1,2-Dichloroethane	%	102		6177081	102		6177081
o-Terphenyl	%	102		6177276	101		6177276
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							



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PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		JZA657			JZA658		
Sampling Date		2019/06/07 10:30			2019/06/07 09:15		
COC Number		721868-01-01			721868-01-01		
	UNITS	19F0452 - FUELING AREA	RDL	QC Batch	19F0453 - ABSORBENT PAD FROM FUEL SHED	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	0.020	6177081	ND	0.10	6179009
Toluene	ug/g	ND	0.020	6177081	0.52	0.10	6179009
Ethylbenzene	ug/g	ND	0.020	6177081	1.6	0.10	6179009
o-Xylene	ug/g	ND	0.020	6177081	3.3	0.10	6179009
p+m-Xylene	ug/g	ND	0.040	6177081	5.0	0.20	6179009
Total Xylenes	ug/g	ND	0.040	6177081	8.4	0.20	6179009
F1 (C6-C10)	ug/g	ND	10	6177081	160	50	6179009
F1 (C6-C10) - BTEX	ug/g	ND	10	6177081	150	50	6179009
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	10	6177276	370000	1000	6178297
F3 (C16-C34 Hydrocarbons)	ug/g	69	50	6177276	500000	5000	6178297
F4 (C34-C50 Hydrocarbons)	ug/g	ND	50	6177276	ND	5000	6178297
Reached Baseline at C50	ug/g	Yes		6177276	Yes		6178297
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	99		6177081	111		6179009
4-Bromofluorobenzene	%	97		6177081	90		6179009
D10-Ethylbenzene	%	106		6177081	85		6179009
D4-1,2-Dichloroethane	%	99		6177081	99		6179009
o-Terphenyl	%	97		6177276	116		6178297
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							



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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.7°C
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Samples received above 10 degrees celsius and processed with client consent

Sample JZA658 [19F0453 - ABSORBENT PAD FROM FUEL SHED] : F2-F4 Analysis: Due to the nature of the sample matrix, moisture content was not available. Results were calculated on wet weight basis.

Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

F1-BTEX Analysis: Due to the nature of the sample matrix, moisture content was not available. Results were calculated on wet weight basis. Detection limits were adjusted for sample weight.

BTEX & F1 Analysis: Samples were extracted on 2019/06/15.

Results relate only to the items tested.



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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6176855	GYA	RPD	Moisture	2019/06/14	2.4		%	20
6177081	LRA	Matrix Spike [JZA653-03]	1,4-Difluorobenzene	2019/06/14		100	%	60 - 140
			4-Bromofluorobenzene	2019/06/14		100	%	60 - 140
			D10-Ethylbenzene	2019/06/14		103	%	60 - 140
			D4-1,2-Dichloroethane	2019/06/14		103	%	60 - 140
			Benzene	2019/06/14		101	%	60 - 140
			Toluene	2019/06/14		100	%	60 - 140
			Ethylbenzene	2019/06/14		101	%	60 - 140
			o-Xylene	2019/06/14		103	%	60 - 140
			p+m-Xylene	2019/06/14		103	%	60 - 140
			F1 (C6-C10)	2019/06/14		103	%	60 - 140
6177081	LRA	Spiked Blank	1,4-Difluorobenzene	2019/06/14		102	%	60 - 140
			4-Bromofluorobenzene	2019/06/14		99	%	60 - 140
			D10-Ethylbenzene	2019/06/14		97	%	60 - 140
			D4-1,2-Dichloroethane	2019/06/14		106	%	60 - 140
			Benzene	2019/06/14		106	%	60 - 140
			Toluene	2019/06/14		102	%	60 - 140
			Ethylbenzene	2019/06/14		98	%	60 - 140
			o-Xylene	2019/06/14		95	%	60 - 140
			p+m-Xylene	2019/06/14		97	%	60 - 140
			F1 (C6-C10)	2019/06/14		99	%	80 - 120
6177081	LRA	Method Blank	1,4-Difluorobenzene	2019/06/14		101	%	60 - 140
			4-Bromofluorobenzene	2019/06/14		98	%	60 - 140
			D10-Ethylbenzene	2019/06/14		99	%	60 - 140
			D4-1,2-Dichloroethane	2019/06/14		103	%	60 - 140
			Benzene	2019/06/14	ND, RDL=0.020		ug/g	
			Toluene	2019/06/14	ND, RDL=0.020		ug/g	
			Ethylbenzene	2019/06/14	ND, RDL=0.020		ug/g	
			o-Xylene	2019/06/14	ND, RDL=0.020		ug/g	
			p+m-Xylene	2019/06/14	ND, RDL=0.040		ug/g	
			Total Xylenes	2019/06/14	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2019/06/14	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2019/06/14	ND, RDL=10		ug/g	
6177081	LRA	RPD [JZA653-03]	Benzene	2019/06/14	NC		%	50
			Toluene	2019/06/14	0.64		%	50
			Ethylbenzene	2019/06/14	6.3		%	50
			o-Xylene	2019/06/14	5.8		%	50
			p+m-Xylene	2019/06/14	0.28		%	50
			Total Xylenes	2019/06/14	2.3		%	50
			F1 (C6-C10)	2019/06/14	NC		%	30
			F1 (C6-C10) - BTEX	2019/06/14	NC		%	30
6177276	GUL	Matrix Spike	o-Terphenyl	2019/06/15		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/15		102	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/06/15		95	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2019/06/15		95	%	50 - 130
6177276	GUL	Spiked Blank	o-Terphenyl	2019/06/15		100	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/15		102	%	80 - 120



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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6177276	GUL	Method Blank	F3 (C16-C34 Hydrocarbons)	2019/06/15		95	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2019/06/15		96	%	80 - 120
			o-Terphenyl	2019/06/15		103	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/15	ND, RDL=10		ug/g	
6177276	GUL	RPD	F3 (C16-C34 Hydrocarbons)	2019/06/15	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2019/06/15	ND, RDL=50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2019/06/16	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/06/16	NC		%	30
6178297	GUL	Matrix Spike	F4 (C34-C50 Hydrocarbons)	2019/06/16	NC		%	30
			o-Terphenyl	2019/06/14		105	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/14		113	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2019/06/14		112	%	50 - 130
6178297	GUL	Spiked Blank	F4 (C34-C50 Hydrocarbons)	2019/06/14		111	%	50 - 130
			o-Terphenyl	2019/06/14		100	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/14		105	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2019/06/14		104	%	80 - 120
6178297	GUL	Method Blank	F4 (C34-C50 Hydrocarbons)	2019/06/14		102	%	80 - 120
			o-Terphenyl	2019/06/14		107	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2019/06/14	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2019/06/14	ND, RDL=50		ug/g	
6178297	GUL	RPD	F4 (C34-C50 Hydrocarbons)	2019/06/14	ND, RDL=50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2019/06/15	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2019/06/15	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2019/06/15	NC		%	30
6179009	DAN	Spiked Blank	1,4-Difluorobenzene	2019/06/18		101	%	60 - 140
			4-Bromofluorobenzene	2019/06/18		100	%	60 - 140
			D10-Ethylbenzene	2019/06/18		90	%	60 - 140
			D4-1,2-Dichloroethane	2019/06/18		91	%	60 - 140
			Benzene	2019/06/18		91	%	60 - 140
			Toluene	2019/06/18		105	%	60 - 140
			Ethylbenzene	2019/06/18		101	%	60 - 140
			o-Xylene	2019/06/18		105	%	60 - 140
			p+m-Xylene	2019/06/18		105	%	60 - 140
			F1 (C6-C10)	2019/06/18		81	%	80 - 120
			6179009	DAN	RPD	Benzene	2019/06/18	10
Toluene	2019/06/18	11					%	50
Ethylbenzene	2019/06/18	9.2					%	50
o-Xylene	2019/06/18	9.4					%	50
p+m-Xylene	2019/06/18	7.8					%	50
F1 (C6-C10)	2019/06/18	3.2					%	30
6179009	DAN	Method Blank	1,4-Difluorobenzene	2019/06/18		101	%	60 - 140
			4-Bromofluorobenzene	2019/06/18		98	%	60 - 140
			D10-Ethylbenzene	2019/06/18		99	%	60 - 140
			D4-1,2-Dichloroethane	2019/06/18		91	%	60 - 140
			Benzene	2019/06/18	ND, RDL=0.020		ug/g	
			Toluene	2019/06/18	ND, RDL=0.020		ug/g	



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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2019/06/18	ND, RDL=0.020		ug/g	
			o-Xylene	2019/06/18	ND, RDL=0.020		ug/g	
			p+m-Xylene	2019/06/18	ND, RDL=0.040		ug/g	
			Total Xylenes	2019/06/18	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2019/06/18	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2019/06/18	ND, RDL=10		ug/g	
6179055	DT1	Matrix Spike	Acid Extractable Arsenic (As)	2019/06/17		97	%	75 - 125
			Acid Extractable Lead (Pb)	2019/06/17		92	%	75 - 125
			Acid Extractable Mercury (Hg)	2019/06/17		85	%	75 - 125
6179055	DT1	Spiked Blank	Acid Extractable Arsenic (As)	2019/06/17		105	%	80 - 120
			Acid Extractable Lead (Pb)	2019/06/17		104	%	80 - 120
			Acid Extractable Mercury (Hg)	2019/06/17		96	%	80 - 120
6179055	DT1	Method Blank	Acid Extractable Arsenic (As)	2019/06/17	ND, RDL=1.0		ug/g	
			Acid Extractable Lead (Pb)	2019/06/17	ND, RDL=1.0		ug/g	
			Acid Extractable Mercury (Hg)	2019/06/17	ND, RDL=0.050		ug/g	
6179055	DT1	RPD	Acid Extractable Arsenic (As)	2019/06/17	5.3		%	30
			Acid Extractable Lead (Pb)	2019/06/17	0.84		%	30
			Acid Extractable Mercury (Hg)	2019/06/17	0.094		%	30
6182236	DDS	Matrix Spike	F4G-sg (Grav. Heavy Hydrocarbons)	2019/06/18		NC	%	65 - 135
6182236	DDS	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2019/06/18		102	%	65 - 135
6182236	DDS	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2019/06/18	ND, RDL=100		ug/g	
6182236	DDS	RPD [JZA654-02]	F4G-sg (Grav. Heavy Hydrocarbons)	2019/06/18	NC		%	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

A handwritten signature in black ink, appearing to read 'Anastassia Hamanov', written over a horizontal line.

Anastassia Hamanov, Scientific Specialist

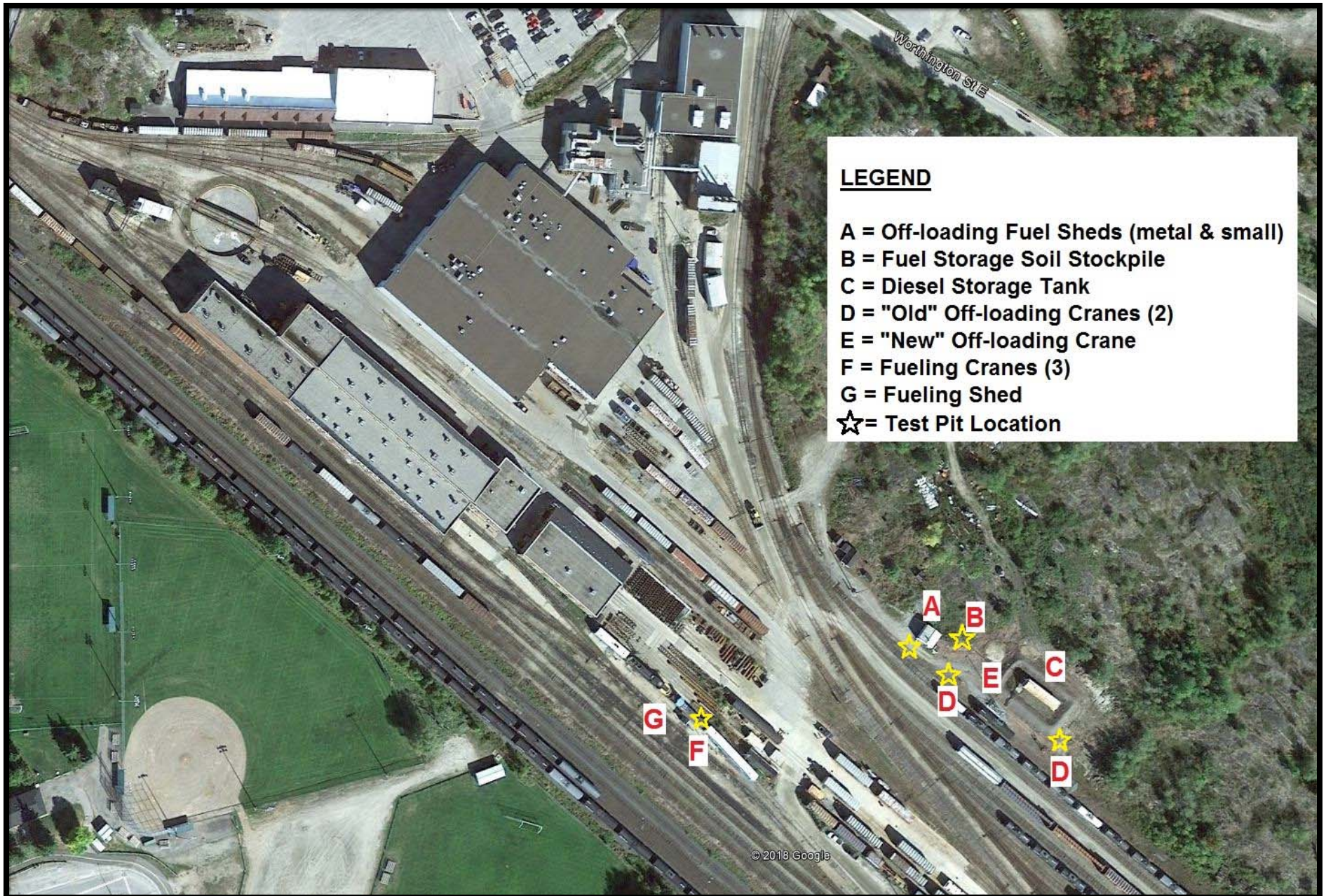
A handwritten signature in black ink, appearing to read 'Brad Newman', written over a horizontal line.

Brad Newman, Scientific Service Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

APPENDIX 'E'

**Structure and Surface Soil Sampling
Location Drawing**



**ONR Fueling Facility North Bay, Ontario
Structure and Test Pit Location Drawing**



Standards Respecting Railway Clearances

May 14, 1992 (TC E-05)



Transport
Canada

Transports
Canada

Canada

STANDARD RESPECTING RAILWAY CLEARANCES

1. APPLICATION OF STANDARD

- 1.1 This Standard shall apply on all tracks owned or operated on by a railway company.

2. INTERPRETATION

- 2.1 In this Standard:

“Chief Engineer” means a person occupying the position of Chief Engineer, or in companies not having a Chief Engineer the senior official designated for this purpose.

3. STANDARD CLEARANCES

Subject to section 4:

- 3.1 (a) every structure over or beside a railway track, except those structures governed by paragraphs (b), (c) and (d) below, shall afford the minimum clearances set out in Diagram 1;
- (b) all railway bridges, snowsheds and overhead timber bridges shall afford the minimum clearances as set out in Diagram 2;
- (c) all railway tunnels shall afford the minimum clearances as set out in Diagram 3;
- (d) industrial sidings shall afford the minimum clearances as set out in Diagram 4, where required to be different to those set out in Diagram 1;
- (e) a lateral allowance for track curvature of 25.4 mm (1 inch) per degree shall be provided;
- (f) all clearance diagrams shall be perpendicular to the plane of the top of rails.

4. LESS THAN STANDARD CLEARANCES

- 4.1 All existing structures, bridges, snowsheds, overhead timber bridges and tunnels which met previous clearance requirements, but encroach within the clearance limits prescribed herein, shall not be considered as having less than standard clearances and shall be permitted to remain until the restrictive feature is modified or replaced.

- 4.2 Clearances not meeting the requirements of section 3 above, are permitted in the following circumstances:
- (a) on a track at a main shop, diesel or car shop;
 - (b) doorways in buildings;
 - (c) ramps, platforms and similar structures to facilitate loading, unloading, servicing and maintenance;
 - (d) permanent structures to provide for or support locomotive and car wash facilities;
 - (e) temporary restrictions necessary to facilitate construction or repair of overhead structures, in which case the train crews are to be notified.
- 4.3 (a) Where circumstances do not permit the standard clearances prescribed in section 3.1, exceptions may be authorized by the Chief Engineer.
- (b) Modifications may be made to clearances covered in subsection 4.1 and subsection 4.2 paragraphs (a), (d) and (e) upon approval of the Chief Engineer.
- (c) The construction of a structure creating less than standard clearances shall not begin until approved by the Chief Engineer.
- 4.4 At locations described in subsection 4.2 paragraphs (b) and (c) and where the Chief Engineer has approved a less than standard clearance pursuant to sections 3.1 and 4.3, a less than standard clearance sign, as shown in Appendix "A", shall be erected and maintained adjacent to the track on which the restriction is located and at an adequate distance from the restriction. Where physical impediments preclude the erection of such a sign, the less than standard clearance will be identified in special instructions.
- 4.5 Requests for approval of less than standard clearances shall be submitted to the Chief Engineer and shall include the following information:
- (a) reasons for less than standard clearance;
 - (b) if operations over the trackage concerned will be by locomotive, car puller or gravity;
 - (c) if locomotives will pass the point of less than standard clearance;
 - (d) type of cars that will pass the point of less than standard clearance;

- (e) confirmation that trackage cannot be realigned to avoid the less than standard clearance or that the restricting object cannot be placed where it would no longer represent a restriction;
 - (f) if the less than standard clearance will be permanent or temporary;
 - (g) a drawing showing the relative position of the trackage and the obstruction, with cross sections at each point of less than standard clearance indicating the vertical clearance from the top of rail and the horizontal clearance from the centre line of the track, together with the location of the less than standard clearance sign.
- 4.6 Employees must not ride the side or above the roof of a moving engine or car when passing side and/or overhead restrictions.

5. TRACK CENTRES

5.1 Subject to subsection 5.2, all trackage built or rearranged after the coming into force of this Standard shall, comply with the minimum distances between track centre lines with due allowance for superelevation and curvature and shall be as follows:

- | | | | |
|---|------|---|---------------------|
| (a) Main tracks | 3.96 | m | (13 feet) |
| (b) Main and siding tracks | 4.27 | m | (14 feet) |
| (c) Main or running tracks and parallel yard tracks | 4.27 | m | (14 feet) |
| (d) Yard tracks | 4.11 | m | (13 feet, 6 inches) |
| (e) Ladder and other tracks | 4.57 | m | (15 feet) |
| (f) Parallel ladder tracks | 5.49 | m | (18 feet) |
| (g) Freight shed tracks | 3.66 | m | (12 feet) |
| (h) Team tracks in pairs | 3.66 | m | (12 feet) |
| (i) Passenger station tracks without platform between | 3.96 | m | (13 feet) |
- 5.2 (a) Where circumstances do not permit the track centres prescribed in subsection 5.1, exceptions may be authorized by the Chief Engineer.

(b) The construction of tracks with less than minimum distances, as provided for in subsection 5.2 paragraph (a), shall not begin until approved by the Chief Engineer.

5.3 The minimum distance between track centre lines shall be increased to account for curvature and superelevation as follows:

(a) 50.8 mm (2 inches) per degree of curvature of track;

(b) where the curve elevation of the outer track exceeds the elevation of an adjacent inner track, an additional 63.5 mm (2-1/2 inches) per 25.4 mm (1 inch) of difference in curve elevations between the adjacent tracks.

6. SIDING AGREEMENTS

6.1 Siding agreements shall contain a clause setting out the requirements of this Standard.

7. WIRES AND CONDUCTORS

7.1 Canadian Standards Association Standard C22.3 shall be used for minimum clearances.

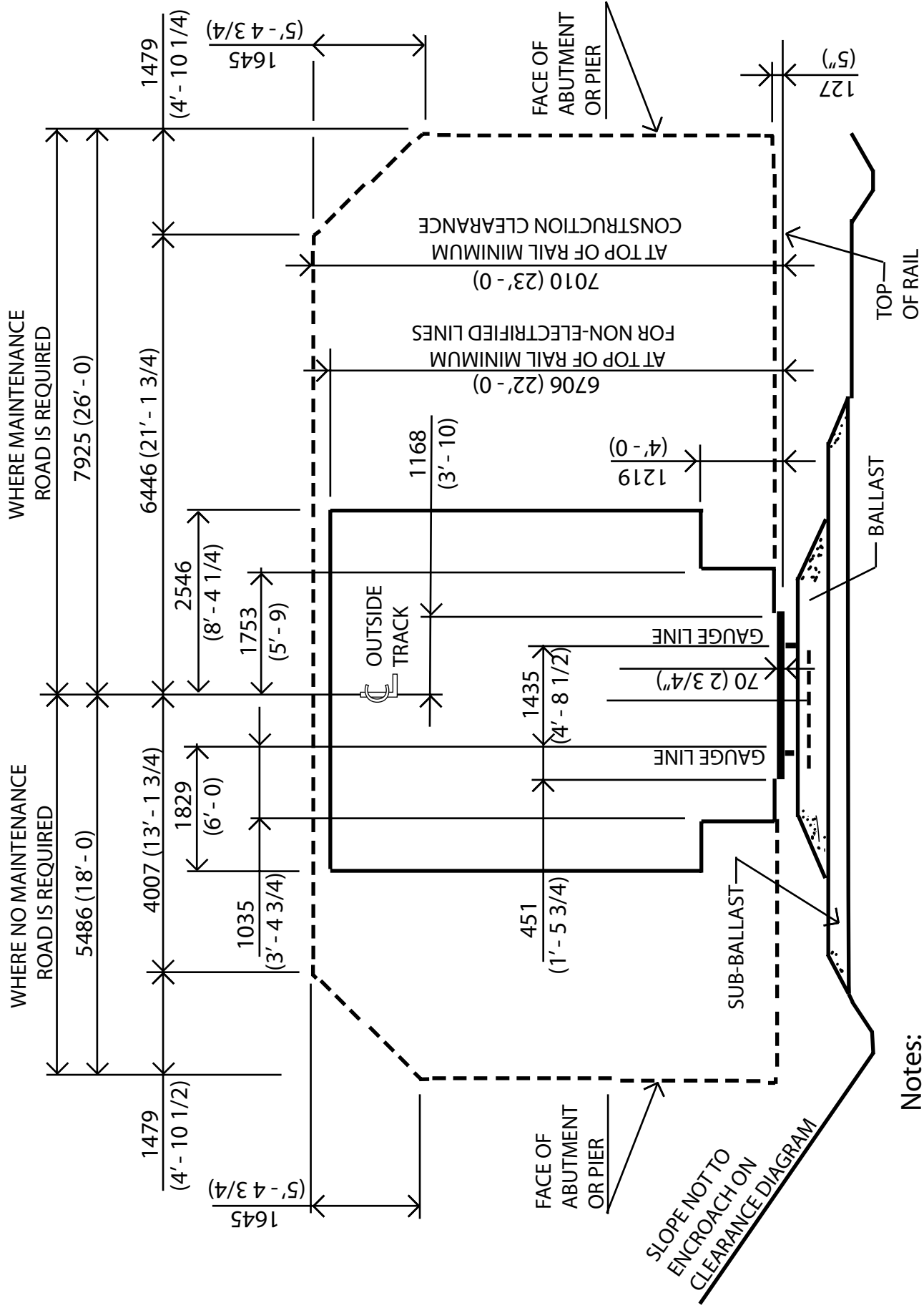
8. NOTIFYING THE MINISTER OF TRANSPORT

8.1 The Minister of Transport will be notified, in writing, of:

(a) clearances pursuant to subsection 4.2 paragraphs (b) and (c) and subsection 4.3 paragraph (a);

(b) deviations of track centres specified in subsection 5.1 paragraphs (a), (b) and (c).

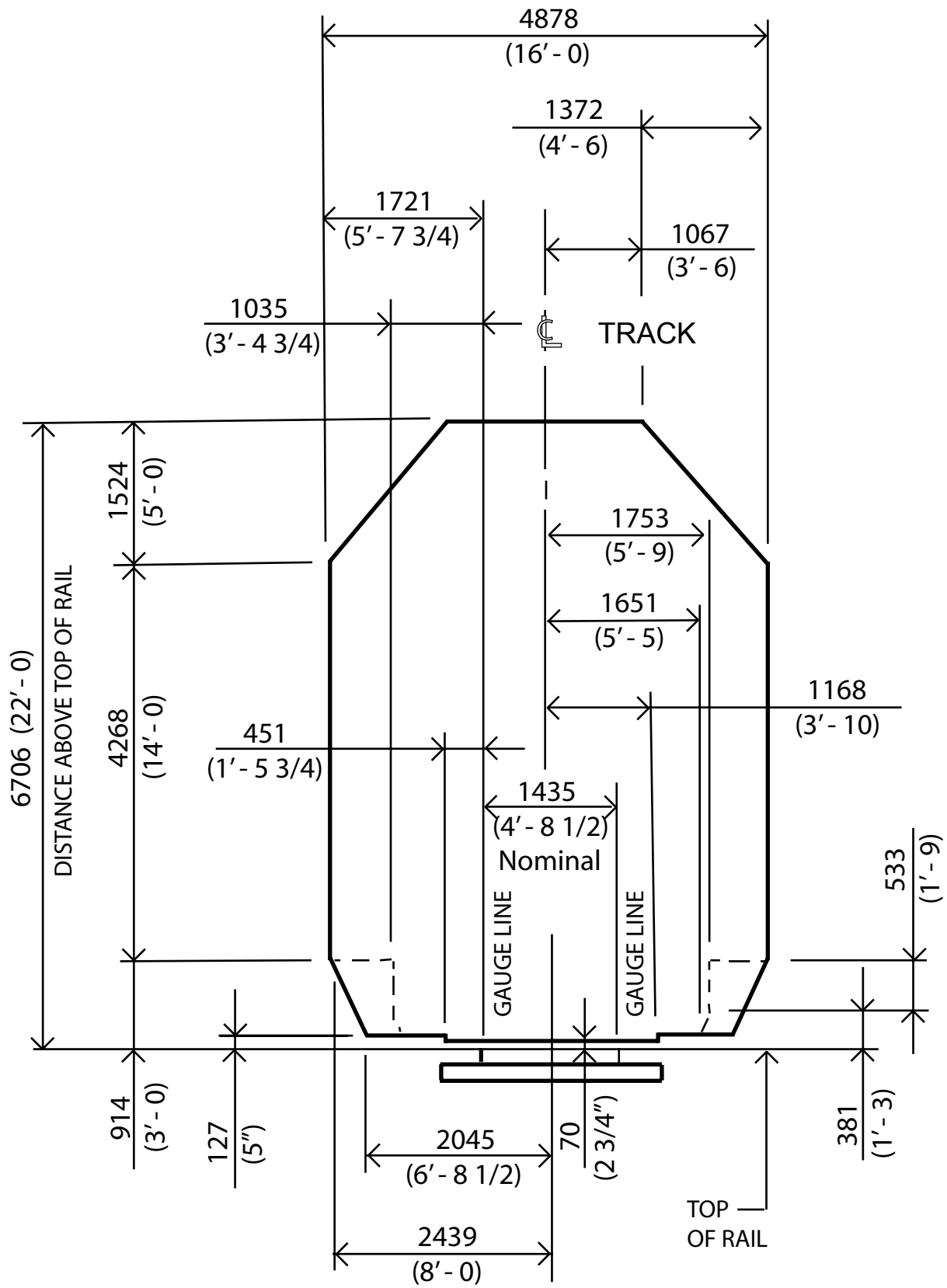
Diagram 1: All Structures Over or Beside the Railway Tracks (Scale 1:75)



Notes:

- Solid lines indicate minimum standard clearances
- Broken lines indicate required clearances, where approved by the national transportation

Diagram 2: All Railway Bridges, Snowsheds and Overhead Timber Bridges (Scale 1:75)



Note: Broken lines indicate minimum clearances that may be used when authorized by the chief engineer.

Diagram 3: All Railway Tunnels (Scale 1:75)

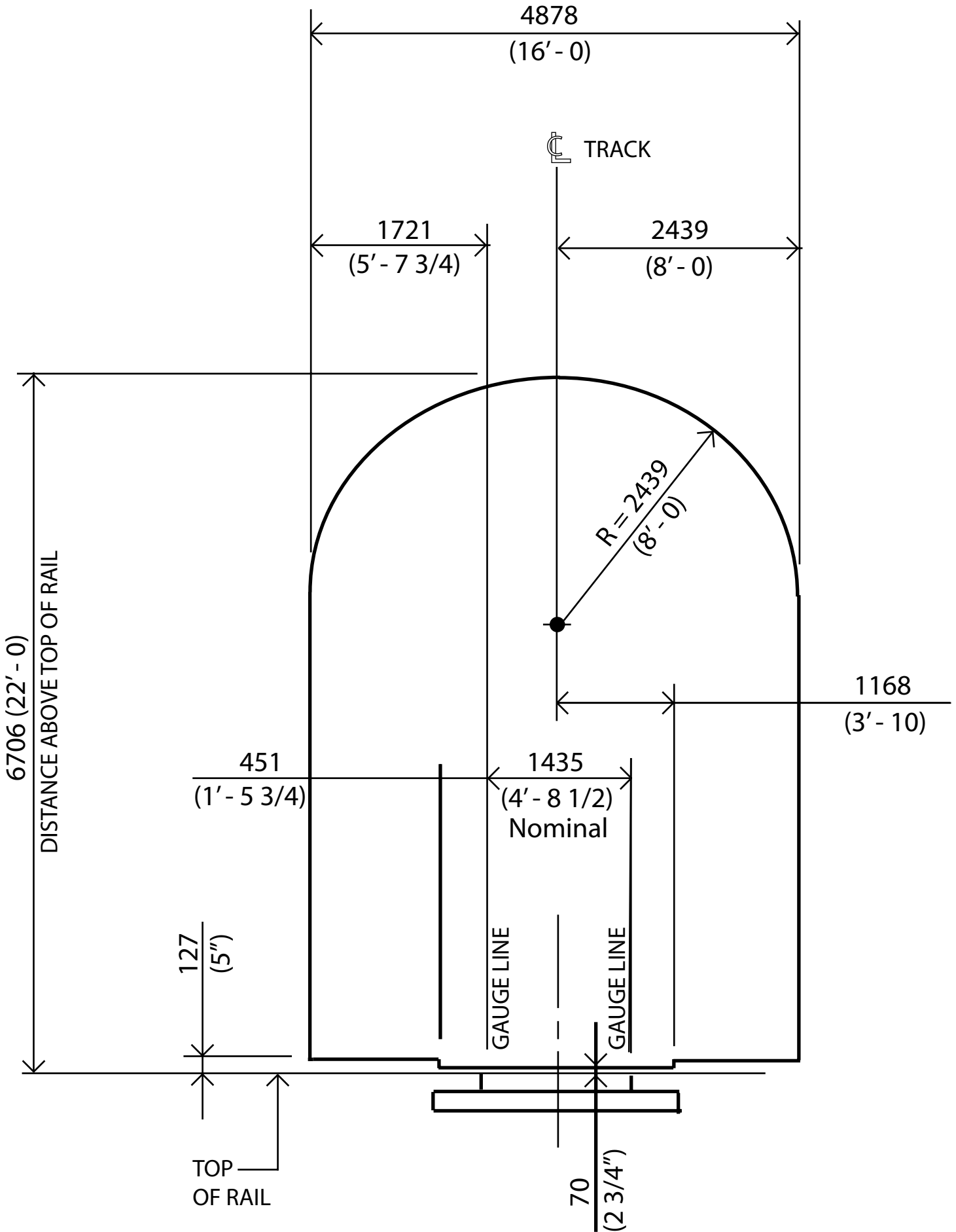
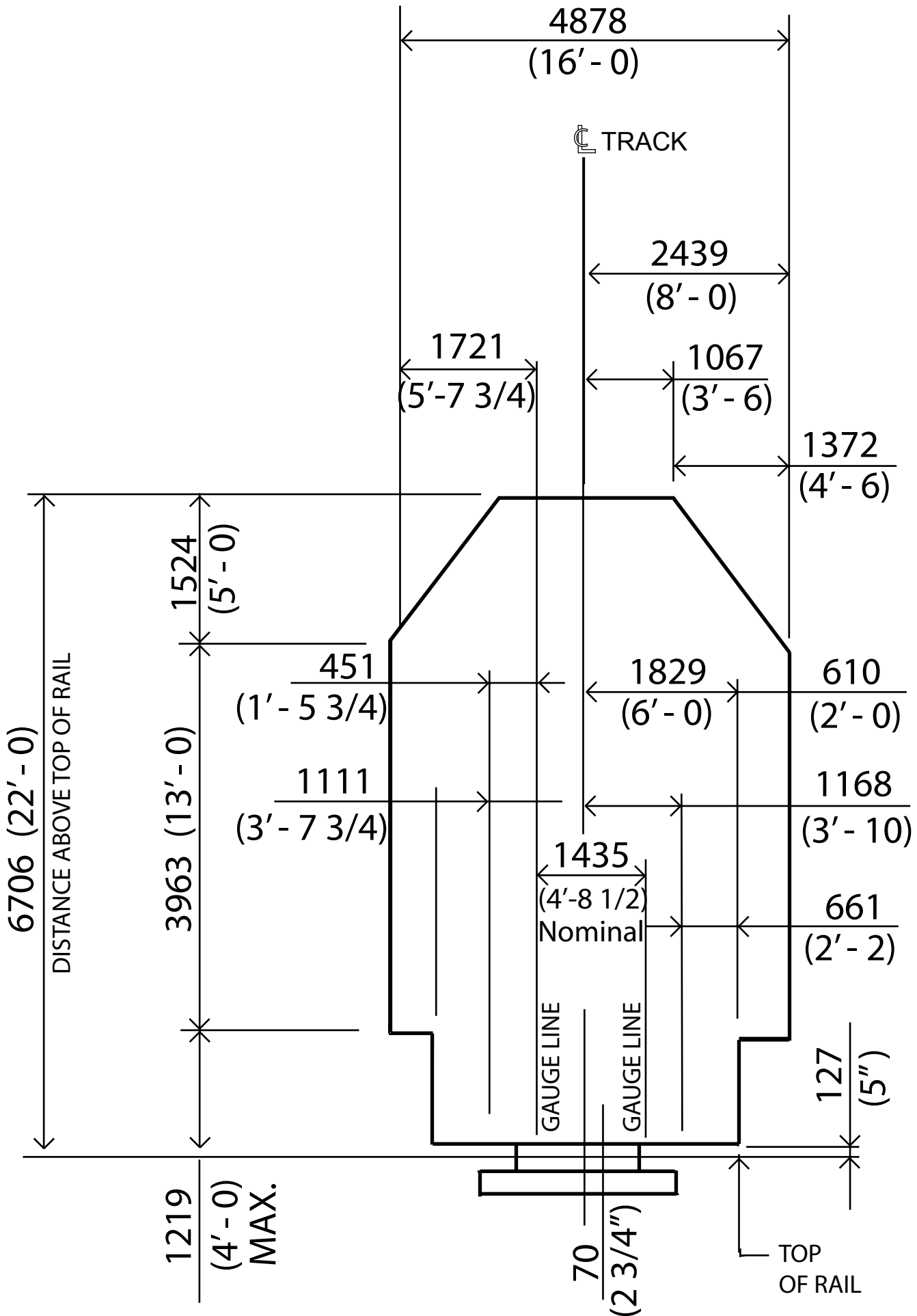
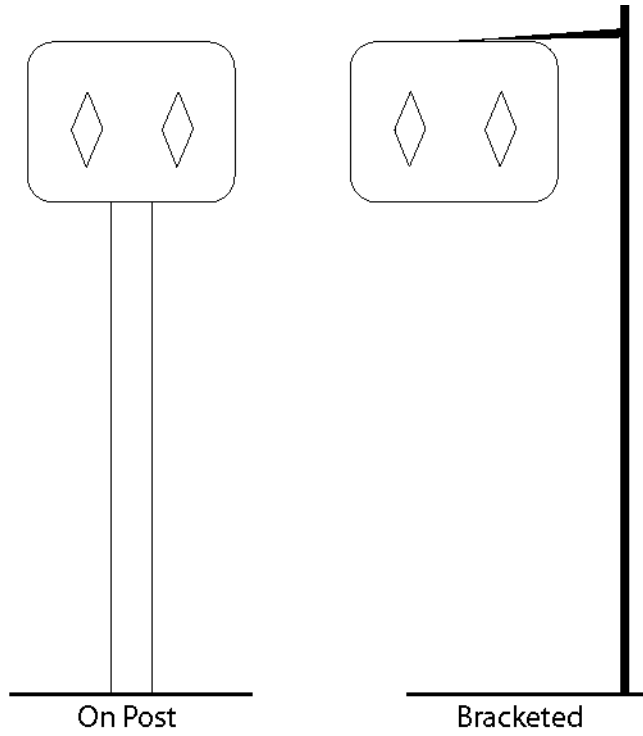


Diagram 4: Industrial Sidings (Scale 1:75)

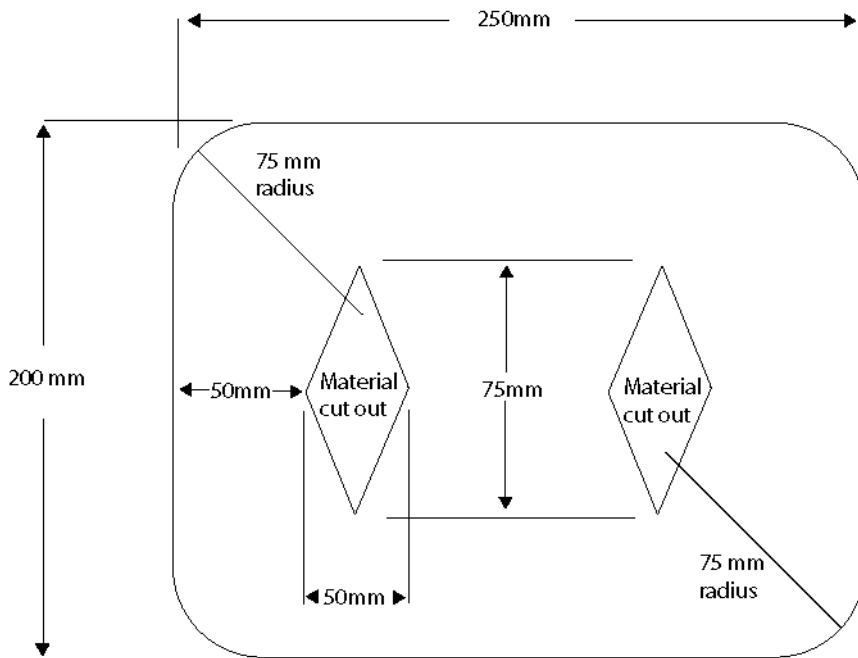


Appendix A: Standard Restricted Clearance Sign

- Possible Methods of Erecting Sign



- Elevation of Sign



Reflecting Material Specifications: 62-GP-11M

Reflectivity: Level 1

Sheeting Material: Reflective yellow sheeting to cover the entire surface

1 GENERAL

1.01 REFERENCE STANDARDS

1. Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Refer to Specification Index for Sections applicable to this work.

1.03 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract includes the following:
 - .1 Demolition of the existing shed and concrete pad as required.
 - .2 Stamped engineered drawings for the concrete foundation and sand tower.
 - .3 Supply and install of a new sand tower.
 - .4 Commissioning and testing of the new sand tower.
- .2 The Summary of Work provided above is for reference only:
 - .1 The contractor shall complete the demo and footing by September 27, 2024.
 - .2 The sand tower is to be installed by November 29, 2024.
 - .3 Commissioning and testing to be completed by December 13, 2024.

1.04 SUBMITTALS

- .1 Submit for review and Acceptance in accordance with Section 01 33 00 - Submittal Procedures.
- .2 In addition to Submittals identified throughout the Specifications, submit the following:
 - .1 Submit Project Construction Schedule in accordance with Section 01 32 16.16 - Construction Progress Schedule.
 - .2 Submit Construction Waste Management Plan highlighting recycling and salvage requirements in accordance with Section 01 74 19 - Waste Management And Disposal.
 - .3 Submit site-specific Health and Safety Plan in accordance with Section 01 35 29.06 - Health and Safety Requirements.
 - .4 Submit a Construction Project Management Plan, including communication, risk, and Quality Management Plans.

1.05 WORK BY OTHERS

- .1 The Work under this Contract shall be performed by the Contractor.
- .2 Contractor shall co-operate with other contractors retained by the Owner in carrying out their respective works and carry out instructions from the Owner and the Consultant. Refer to Contract Documents for additional requirements.

1.06 WORK SEQUENCE

- .1 Construct Work in a manner that accommodates Owner's and public continued and/or intermittent use of premises during construction. Refer to Section 01 14 00 - Work Restrictions.
- .2 Co-ordinate Construction Schedule and Owners use of premises during construction.
- .3 Do not close off Owner or public usage of premises until use of one stage of Work will provide alternate usage.
- .4 Maintain fire access/control.
- .5 Protect workers and public safety.
- .6 Work near rail tracks shall be preapproved by the Owner and completed as per Owner's procedures and policies.

1.07 CONTRACTOR USE OF PREMISES

- .1 Contractor shall establish a Construction Area where the Contractor assumes the role of Constructor and will be responsible for the Construction Area until Ready for Takeover. The Contractor will be required to secure the Construction Area for the duration of the Project. The Contractor will be responsible for all activities inside the Construction Area, including health and safety. The Contractor shall coordinate the Work with the Owner to ensure that work being done by the Owner in the areas outside of the Construction Area is not interrupted. Access by the Contractor shall be restricted to the Construction Area only.
- .2 In some circumstances, Contractor shall coordinate and limit its access to Construction Area to allow:
 - .1 Owner occupancy.
 - .2 Partial owner occupancy.
 - .3 Work by other contractors or utilities providers.
 - .4 Public usage.
 - .5 Third Party Property Owner occupancy and use.
- .3 Co-ordinate use of premises under the direction of the Owner.
- .4 Refer to Section 01 51 00 - Temporary Utilities, Section 01 52 00 - Construction Facilities and Section 01 56 00 - Temporary Barriers and Enclosures, for temporary facilities, access roads and parking areas, traffic regulations, and utilities.

1.08 OWNER OCCUPANCY

- .1 Owner may occupy premises (adjacent buildings, railway tracks) during the entire construction period for execution of normal operations.
- .2 Co-operate with the Owner in scheduling of the Work to minimize conflict and to facilitate Owner occupancy and usage of the premises.

1.09 Products Supplied by Others

- .1 Contractor is responsible for receiving, unloading, if required, and handling Products Supplied by

Others at the project site; setting or installing the Products in place; making any required connections to the mechanical, plumbing, electrical systems, and any other systems; and disposal of shipping or packing materials. Owner and/or Consultant and Contractor shall jointly inspect the Products for damage upon delivery to the Place of the Work. If this inspection determines that the furnished Products are damaged or defective, the Owner will arrange for the necessary replacement or repairs. Contractor is responsible for protecting the Products Supplied by Others from damage during storage and handling and is responsible for damage caused to those Products during storage and handling.

- .2 Contractor to install all Products Supplied by Others in accordance with the manufacturer's installation instructions and the design Drawings, Specifications and Contract Documents.
- .3 Contractor to review manufacturer's installation instructions and advise the Consultant of any discrepancies or issues in a timely manner to avoid any potential delays.
- .4 Contractor to obtain manufacturer and Consultant approval before making any modification to Products Supplied by Others.
- .5 Upon completion of the installation of the Products Supplied by Others, the Contractor, the Consultant and/or the Owner will inspect the Work. Manufacturers and or Suppliers may participate in the inspection as required by their contract obligations. Upon Acceptance, the Contractor will provide a workmanship warranty in accordance with the Contract Documents.

1.10 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING AND STRUCTURES

- .1 Execute Work with least possible interference or disturbance to premises, site, Owner operations, occupants, public and normal use of premises. Arrange with the Consultant and Owner to facilitate execution of Work.
- .2 Use only elevators existing in the building for moving workers and material.
 1. Investigate the status of existing elevators in building(s) to determine if they are functional and safe for moving workers and materials before the Work starts.
 2. Provide the required protection for passenger elevators walls and obtain the Owner approval before using these elevators.
 3. Accept liability for damage, safety of equipment and overloading of existing equipment.

1.11 EXISTING SERVICES

- .1 Notify the Owner, the Consultant, Third Party Property Owners when applicable, and utility companies of intended interruption of existing services and obtain required permissions when applicable.
- .2 Where Work involves breaking into or connecting to existing services, provide the Owner at least five (5) Working Days' notice of necessary interruptions of mechanical or electrical service during the Work. Minimize the duration of interruptions. Carry out Work at times as directed by Authorities Having Jurisdiction and the Owner to ensure minimum disturbance to pedestrian and vehicular traffic and the Owner operations.
- .3 Provide alternative safe and protected routes for personnel, pedestrian and vehicular traffic.
- .4 Establish location and extent of service lines in the Place of the Work before starting Work. Notify

the Consultant of findings.

- .5 Submit schedule for Acceptance by the Consultant ten (10) Working Days before any scheduled work for any shut-down or closure of active service or facility including power and communications services. Adhere to Accepted schedule and provide notice to affected parties. Refer to Section 01 14 00 - Work Restrictions.
- .6 Provide temporary services when directed by the Owner to maintain critical operations, building and tenant services. Refer to Section 01 14 00 - Work Restrictions.
- .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- .8 Where unknown services are encountered, immediately advise the Consultant and confirm findings in writing.
- .9 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in a manner approved by Authorities Having Jurisdiction and the Consultant.
- .10 Record locations of maintained, re-routed and abandoned service lines.
- .11 Construct barriers, as required, in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .12 Locate and trace existing underground services before any excavation.
- .13 Any damage to existing services during the Work will be the responsibility of the Contractor.

1.12 DOCUMENTS REQUIRED

- .1 Maintain at the Place of the Work, one copy of each document as follows:
 - .1 Contract Documents.
 - .2 Contract Drawings.
 - .3 Technical Specifications.
 - .4 Accepted Shop Drawings, Product data and samples.
 - .5 List of Outstanding Shop Drawings.
 - .6 Change Orders.
 - .7 Other Contract Amendments.
 - .8 Field Test Reports.
 - .9 Copy of Accepted Construction Schedule.
 - .10 Health and Safety Plan and Other safety related documents.
 - .11 As-Built Drawings.
 - .12 Other documents as specified.

2 EXECUTION

2.01 General Requirements:

- .1 Contractor will be required to complete the Work in accordance with applicable federal, provincial, and municipal laws.
- .2 The Contractor shall designate a Project Manager with overall responsibility for the Work. The Contractor will also designate a site supervisor who will be responsible for managing the Work at each site and be responsible for on-site safety, including all Sub-contractors and Suppliers. The site supervisor will be the single point of contact at each site. This site supervisor will be required to communicate with the Consultant and Owner as required to ensure the Work is completed safely with no impact on Owner operations.
- .3 The Contractor will be required to coordinate their hours of work with the Owner.
- .4 The Contractor's employees, Subcontractors, and Suppliers will be required to sign in and sign out every time they enter or leave the Place of the Work using a sign-in/sign-out log book which will be held by the site supervisor in charge of that site.
- .5 Contractor shall supply all necessary tools, machinery, and equipment to perform the Work including, but not limited to, forklifts, mobile cranes, hoisting equipment, scaffolding, ladders, man lifts, temporary lighting, heating, welding machines, ventilation, consumables, and any other material or equipment required to complete the Work. The Contractor shall provide all necessary vehicles and qualified personnel to transport people and materials.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

1. Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Canadian Rail Operating Rules.
- .2 ONTC Contractor/Subcontractor Policy.
- .3 Contractors Working On ONTC Property Near Railway Tracks.
- .4 Railway Flagging Protection Policy
- .5 Section 01 73 00 – Execution
- .6 ONTC Hot Work Policy
- .7 ONTC Electrical Safety Policy

1.03 ACCESS AND EGRESS

- .1 Design, construct and maintain temporary “access to” and “egress from” Construction Areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with the applicable laws of Authorities Having Jurisdiction.

1.04 USE OF SITE AND FACILITIES

- .1 Execute Work with least possible interference or disturbance to normal use of premises. Make arrangements with Consultant to facilitate Work as stated.
- .2 Where premises are not owned by the Owner or are leased to Third Party Property Owners, provide written notification of access and planned Work to the Consultant (10) Working Days prior to the Work commencing.
- .3 Maintain existing services to building and provide for safe and protected access for people and vehicles.
- .4 Where security is reduced by the Work provide temporary means to maintain security.
- .5 Closures: protect the Place of the Work temporarily until permanent enclosures are completed.
- .6 Carry out Work Monday to Friday during hours of 7:00 am to 5:00 pm. Work outside of these hours, including on weekends, shall be pre-approved. Submit a request to the Owner for review and approval to work outside these hours a minimum of five (5) Working Days prior to the work commencing.

1.05 SPECIAL REQUIREMENTS

- .1 Protect rail infrastructure as directed by the Owner and obtain approval before working near live tracks. Submit a request to the Consultant in accordance with the Contractors Working On ONTC Property Near Railway Tracks and Railway Flagging Policies for any scheduled work near rail tracks. Requests should be submitted seven (7) Working Days prior to the Work commencing. Include in the request the scope of Work, proposed schedule (duration) and names of workers who will perform the Work. Follow the ONTC policies while working near tracks. Work near tracks will be supervised by the Owner. The Owner will provide a qualified person for flagging protection. Upon completion of the Work, clean the area and return the area and affected adjacent areas to their original or better conditions. Adhere to direction of the person providing flagging protection to ensure the site is safe and ready to resume rail operations.
- .2 Ensure Contractor's personnel on site are familiar with and obey the policies and safety, fire, traffic and security regulations and have completed the ONTC site orientation training.
- .3 Keep within limits of Work and avenues of ingress and egress.
- .4 Contractor may apply for Line Closures (only applicable for main line tracks) if required. Line Closures will not be granted within the times outlined in Section 1.09 Train Timetable for Station Work Near Mainline Track. Submit a request to the Consultant for review and approval a minimum of five (5) Working Days prior to the work commencing for any planned Line Closures.
- .5 **Additional requirements:**
 - .2 Construct Work in stages and in a manner that accommodates the Owner's continued and/or intermittent use of premises during construction.
 - .3 ONTC operations shall not be interrupted. Coordinate with Consultant to facilitate the execution of the work with minimal disruption.
 - .4 Arrange and obtain Consultant approval for any temporary utility outages a minimum of seven (7) Working Days prior to the commencement date of the Work, including details about the Work to be completed and the schedule for the Work. Provide temporary power services to ensure no outages to maintain critical operations, building and tenant services.
 - .5 Limit access to the Construction Area.
 - .6 Employ just-in-time delivery methods to minimize required storage and laydown space.
 - .7 Arrange and obtain Owner approval to access ONTC building to complete Work under this Contract. Submit a request to Owner and the Consultant a minimum of seven (7) Working Days prior to the proposed commencement date for the Work, including details about the Work to be completed, the schedule for the Work and a list of Contractor employees and Subcontractors and Suppliers involved in the Work.
 - .8 Do not move Products and Construction Equipment through the building, unless authorized by the Owner.
 - .9 Park vehicles in locations approved by Consultant.
 - .10 Where the excavation, cutting and/or patching is required closely or immediately adjacent to,

- and/or drilling into, the existing building foundation assess impact and provide for Acceptance a site plan which demonstrates structure is not affected and specifies reinstatement prior to undertaking the Work.
- .11 Contractor shall not access Third Party leased land without prior approval by the Owner. Submit a request to Owner and the Consultant a minimum of seven (7) Working Days prior to the proposed commencement date for the Work, including details about the Work to be completed, the schedule for the Work and a list of Contractor employees and Subcontractors and Suppliers involved in the Work.
 - .12 Park vehicles in locations approved by the Consultant and Third-Party Property Owner.
 - .13 Where the excavation, cutting and/or patching is required closely or immediately adjacent to, and/or drilling into, the existing building foundation assess impact and provide for Acceptance a site plan which demonstrates structure is not affected and specifies reinstatement prior to undertaking the Work.
 - .14 Inform Owner and the Consultant of large deliveries and arrange the delivery in a manner that will not affect ONTC operations or the safety of public.
 - .15 Obey site traffic rules and speed limits.

1.06 SMOKING ENVIRONMENT

- .1 Comply with smoking and vaping restrictions. Smoking and vaping are not permitted.

1.07 VIDEO SURVEILLANCE:

- .1 Video surveillance cameras are installed on Ontario Northland-owned and leased property to ensure the safety and security of passengers, employees, visitors, assets, infrastructure and the public. In accordance with the Freedom of Information and Protection of Privacy Act (FIPPA), the use of video surveillance cameras is carried out in a manner that respects and minimizes privacy intrusion. Recorded video footage only is protected, used or disclosed for investigative purposes related to a health and safety matter, a railway occurrence or for an incident of suspected crime, property damage, motor vehicle damage or personal injury.

1.08 COMMUNICATION PROHIBITION:

- .1 Owner will lead and make any announcements relating to the Work. The Contractor shall not make any announcement of any kind, including press releases, social media posts, public declarations, or any form of publication or announcement, in relation to the Work unless prior written consent is given by Owner. If the Contractor is contacted by any media outlet or other person or entity wishing to make any form of publication or announcement or seeking any information in relation to the Work, the Contractor shall not provide any information and shall refer the person to Owner and immediately notify Owner.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures.

1.03 ADMINISTRATIVE

- .1 Schedule and administer project meetings throughout the progress of the Work in accordance with the Specifications and at the call of the Owner or the Consultant.
- .2 Prepare agenda for meetings.
- .3 Unless otherwise specified in Specification sections, distribute written notice of each meeting five (05) Working Days in advance of meeting date to the Owner, the Consultant and any other meeting participants.
- .4 Provide physical space at one of the Places of Work and make arrangements for meetings.
- .5 The Consultant will chair the meetings.
- .6 Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7 Reproduce and distribute copies of minutes within three (03) Working Days after meetings and transmit to meeting participants and, affected parties not in attendance, the Owner and the Consultant.
- .8 Representatives of the Contractor, Subcontractor and suppliers attending meetings shall be qualified and authorized to act on behalf of the party each represents.

1.04 PRECONSTRUCTION MEETING

- .1 Within (10) Working Days after award of Contract and before Contractor mobilization to the Place of the Work, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities related to the Work.
- .2 The Owner, Consultant, Contractor, major Subcontractors, field inspectors and supervisors and other parties, as applicable and at their discretion, will be in attendance.
- .3 Arrange with the Consultant the time and location of meeting and notify parties concerned minimum five (5) Working Days before meeting.
- .4 Agenda to include, but not limited to:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Construction Schedule: in accordance with Section 01 32 00 – Construction Progress Documentation.

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- .3 Schedule of submission of Shop Drawings, samples, colour chips. Submit Submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .4 Requirements for temporary facilities, site signage, offices, storage sheds, utilities, site set-up/Utility connections, laydown areas, fences in accordance with Section 01 52 00 - Construction Facilities.
 - .5 Delivery schedule of specified equipment in accordance with Specifications.
 - .6 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
 - .7 Proposed changes, Change Orders, procedures, Acceptance required, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
 - .8 Products Supplied by Others
 - .9 Record As-Built Drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .10 Operations and Maintenance manuals in accordance with Section 1 78 00 - Closeout Submittals.
 - .11 Take-over procedures, Acceptance, and warranties in accordance with Section 01 78 00 - Closeout Submittals.
 - .12 Monthly progress, claims, administrative procedures, photographs, holdbacks, commissioning, and training.
 - .13 Appointment of inspection and testing agencies or firms.
 - .14 Insurances, transcript of policies.
 - .15 Site Safety and Fire protection in accordance with section 01 35 29.06 Health And Safety Requirements.
 - .16 Existing conditions and ONTC site use/operations.
 - .17 Cleaning and Waste Management
 - .18 Invoicing and payment procedures
 - .19 Lines of Communication, use of Social Media and distribution List.

1.05 PROGRESS MEETINGS

- .1 During course of Work and up to the completion date, schedule regular monthly progress meetings.
- .2 Contractor, major Subcontractors involved in Work, the Owner, and the Consultant are to be in attendance. Other parties may attend subject to the agreement of the Consultant.
- .3 Agenda to include, but not limited to, the following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.

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- .3 Field observations, problems, conflicts.
 - .4 Problems which impede Construction Schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain baselined Construction Schedule.
 - .7 Proposed revisions to Construction Schedule.
 - .8 Progress against Construction Schedule, during succeeding work period.
 - .9 Review Submittal schedules: expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for effect on Construction Schedule and on completion date.
 - .12 Safety concerns and issues.
 - .13 Open items, Request For Information (RFI) and Supplemental Instructions (SI).
 - .14 Other business.

1.06 COMMISSIONING MEETINGS

- .1 Arrange pre-commissioning meetings for the commissioning of equipment and systems in accordance with 01 91 13 – General Commissioning Requirements. The Owner, the Consultant and Contractor commissioning team shall be in attendance.
- .2 The meeting's intent is to ensure all parties are fully aware of the Commissioning expectations and requirements.
- .3 Meeting Agenda to include, but not limited to:
 - .1 Review Commissioning plan, Specification, and process.
 - .2 Review Commissioning documentation.
 - .3 Review all factory testing that will be required.
 - .4 Review training requirement/schedule.
 - .5 Discuss future Commissioning meetings.
 - .6 Issues/risks.

1.07 SUBSTANTIAL COMPLETION MEETINGS:

- .1 Arrange pre-Substantial Completion meetings. The Contractor, the Owner and the Consultant shall be in attendance.

1.08 OTHER MEETINGS:

- .1 The Contractor shall, as directed by the Consultant, attend Project coordination meetings, which may be required in addition to the specific meetings listed herein. Meetings may include topics related to site and railway safety, orientation and training, design compliance, Work progress and issues, installation of Products Supplied by Others, coordination of Subcontractors, quality, delivery and Acceptance activities, warranty, dispute resolution, and environmental issues.
- .2 Arrange meetings with the Consultant to coordinate large deliveries and in advance of complex installation.

END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 This Section specifies Contractor's responsibilities for the preparation and submission of Construction Schedule updates, progress reports and other documentation related to tracking progress of the Work.
- .2 The purpose of submitting construction progress documentation is to:
 - .1 Inform the Owner and the Consultant of actual progress versus planned progress, and;
 - .2 Provide assurance that scheduling issues are being proactively identified and addressed in a timely manner, and that planned progress is being maintained as closely as possible.

1.02 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.03 RELATED SECTIONS

- .1 Section 01 31 19 - Project Meetings.
- .2 Section 01 33 00 - Submittal Procedures.
- .3 Section 01 77 00 - Closeout Procedures.
- .4 Section 01 32 00.16 - Construction Progress Schedule – Critical Path Method (CPM).

1.04 SUBMISSION

- .1 Submit, for review and Acceptance a Construction Schedule within ten (10) Working Days from Contract award. The Construction Schedule shall be based on the Contractor's initial schedule submitted at the RFP phase. Notify the Consultant of any major changes from the initial schedule.
- .2 Submit schedules in PDF and Excel files. Submit via email unless otherwise requested.
- .3 Consultant will review the Construction Schedule and return review copy within ten (10) Working Days after receipt.
- .4 If changes are required, resubmit, the Construction Schedule for Acceptance within five (5) Working Days after return of review copy.
- .5 The Accepted Construction Schedule shall be baselined and all progress updates shall be made against this version. The baselined Accepted Construction Schedule shall not be changed without the agreement of the Consultant and shall be subject to review and Acceptance prior to becoming the new baselined Construction Schedule.
- .6 Submit updated progress schedule with each monthly construction report in accordance with clause 2.2 of this section.
- .7 Distribute copies of revised schedule to:

- .1 Job site offices.
- .2 Subcontractors.
- .3 Other concerned parties.
- .8 Instruct recipients to report to Contractor within five (5) Working Days any problems anticipated by timetable shown in the schedule.

1.05 CONSTRUCTION SCHEDULE UPDATES

- .1 Show projected percentage of completion of each item as of the last date of the month.
- .2 Indicate progress of each activity to date of submission schedule.
- .3 Show changes occurring since previous submission of Construction Schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised projections of progress and completion.
 - .4 Other identifiable changes.
- .4 Provide a narrative report to define:
 - .1 Problem areas, anticipated delays, and impact on schedule.
 - .2 Corrective action recommended and its effect.
 - .3 Effect of changes on schedules of other prime contractors.
- .5 Schedules shall be continuous, and logic driven without using hard constraints, Lags and Leads.

2 PRODUCTS:

2.01 DAILY CONSTRUCTION REPORTS:

- .1 Prepare a daily construction report recording the following information concerning events at Project Site and include progress photos as applicable:
 - .1 List of subcontractors at Project Site.
 - .2 Approximate count of personnel at Project Site.
 - .3 Equipment at Project Site.
 - .4 Material Deliveries.
 - .5 Accidents/Incidents/Near Misses.
 - .6 Meetings and Significant Decisions.
 - .7 Unusual and emergency Events.
 - .8 Stoppages, Delays, Shortages, and Losses.
 - .9 Orders and requests of Authorities Having Jurisdiction.
 - .10 Change Orders received and implemented.

- .11 Construction Work Change Directives received and implemented.
 - .12 Services Connected and Disconnected.
 - .13 Equipment or System Tests and Startups.
 - .14 Partial Completions and Occupancies.
 - .15 Substantial Completions Authorized.
 - .16 Progress made in Work that day
- .2 Submit daily reports at the end of each shift to ONTC and the Consultant.
 - .3 A report shall be submitted for each Work site.

2.02 MONTHLY CONSTRUCTION REPORTS:

- .1 Monthly progress reports shall be prepared by the Contractor and submitted to the Consultant in the form of an electronic copy of the relevant Construction Schedule files to demonstrate how the Work is actually progressing and the planned and detailed sequencing of the Work at the time of the report. The cut-off date for the monthly progress report shall be the last date of the month and the report shall be submitted no later than ten (10) Working Days after the cut-off date.
- .2 Each monthly progress report shall be in a format acceptable to the Owner, and shall be arranged according to the following headings and sub-headings:
 - .1 Executive Summary.
 - 1. Activity to (date).
 - 2. Forecast activity to (date).
 - .2 Project Cost Information:
 - 1. Budget Summary.
 - 2. Cash Allowance Log.
 - 3. Change Order Log.
 - .3 Project Data:
 - 1. Project Schedule.
 - 2. Shop Drawing Log.
 - 3. Site Inspection Log.
 - 4. Site Testing Log.
 - .4 Risk and Critical Issues Log.
 - .5 Site Photos.
- .3 Each monthly progress report shall include:
 - .1 An updated schedule showing progress against the baselined Accepted Construction Schedule, comparing actual and target progress for all milestones and activities. Sort activities by activity identification number and accompany with descriptions. List early and late start and finish dates together with durations, codes and float.

- .2 Criticality report listing activities and milestones with up to five (5) days of total float used as first sort for ready identification of near critical paths through entire project. List early and late starts and finishes dates, together with durations, codes and float for critical activities.
- .3 Progress report in early start sequence, listing for each trade, activities due to start, to be underway, or finished within two months from monthly update date. List activity identification number, description and duration. Provide columns for entry of actual start and finish dates, duration remaining and remarks concerning action required.
- .4 A schedule narrative, including:
 1. Detailed descriptions of progress, including each stage of procurement, fabrication, delivery to site, construction, installation, and testing;
 2. Discussion of the basis for any work sequencing, logic, interdependencies or original activity duration revisions incorporated into an updated progress schedule; and
 3. Comparisons of actual and planned progress, with a brief commentary on any actual or forecast delays or problems that might have an impact on the completion. date of the Work, and a discussion of the measures being (or to be) adopted to overcome these.
 4. Charts showing the status of Submittals, permits and approvals, utility relocations, purchase orders, manufacturing/fabrication and construction.
 5. For each fabricated item, the name and location of the fabricator, percentage progress, and the actual or expected dates of commencement of fabrication, Contractor's inspections, tests and delivery.
 6. Progress photographs taken, prepared, and submitted in formats specified, all in accordance with Section 01 32 33 - Photographic Documentation.
 7. Request For Information (RFI) log.
- .5 Timely submission of updates is of significant and crucial importance to the management of this project. Lack of or late receipt of updates diminishes their value to the Owner and the Consultant. Therefore, if the Contractor fails to submit any progress schedule or required revision to a progress schedule within the prescribed time period, the Owner, in its sole discretion, may hold back subsequent progress payments until the updated schedule is submitted or the revision is accepted.
- .6 The monthly progress reports and progress schedules will be used by the Owner and the Consultant to monitor the Contractor's performance against the baselined Accepted Construction Schedule.

2.03 RECORDING ACTUAL SITE CONDITIONS ON AS-BUILT DRAWINGS

- .1 Obtain from Consultant an electronic copy of the construction Drawings for the purpose of creating As-built drawings.
- .2 Record information on a set of black line opaque drawings.
- .3 Use marking pens, maintaining separate colours for each major system, for recording information.

- .4 Clearly label each As-Built Drawing as "AS-BUILT DRAWING". Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .5 Record actual construction including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum;
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements;
 - .3 Measured locations of pipes, ducts, conduits, outlets, fixtures, access panels, and appurtenances, referenced to visible and accessible features of construction;
 - .4 Field changes of dimension and detail;
 - .5 Changes made by Change Orders and Supplemental Instructions;
 - .6 References to Shop Drawings, where Shop Drawings show more detail.
 - .7 Referenced Standards to related Shop Drawings and modifications.
 - .8 Details not on original Contract drawings.
- .6 Do not use As-Built Drawings for construction purposes.
- .7 Following construction, Contractor shall prepare As-Built Record Drawings in accordance with Section 01 78 00 Closeout Submittals.

2.04 MATERIAL LOCATION REPORTS:

- .1 At bi-weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Place of the Work. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- .2 Indicate the following categories for stored materials:
 - .1 Material stored prior to previous report and remaining in storage.
 - .2 Material stored prior to previous report and since removed from storage and installed.
 - .3 Material stored following previous report and remaining in storage.

3 EXECUTION

3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE

- .1 Contractor's Construction Schedule Updating: At weekly intervals, update schedule to reflect actual construction progress and activities.
- .2 Distribution: Distribute copies of Accepted Construction Schedule to the Owner, Consultant, Subcontractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - .1 Post copies in Project meeting rooms and temporary field offices.

- .2 When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Project Management Institute (PMI Standards)
 - .1 A Guide to the Project Management Body of Knowledge (PMBOK Guide) - [Fifth Edition].
 - .2 Practice Standard for Scheduling - [2011].
- .2 AACE International Recommended Practice 37R-06 entitled, "Schedule Levels of Detail – As Applied in Engineering, Procurement and Construction".
- .3 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 32 00 – Construction Progress Documentation

1.03 DEFINITIONS

- .1 Activity: Distinct, scheduled portion of work performed during course of a project.
- .2 Activity Duration: time in calendar units between start and finish of a scheduled activity. See also Duration.
- .3 Assumption: factor in planning process that is considered true, real, or certain without proof or demonstration.
- .4 Bar Chart (Gantt Chart): graphic display of schedule-related information.
 - .1 In typical bar chart, schedule activities or work breakdown structure components are listed down left side of chart, dates are shown across the top, and activity durations are shown as date-placed horizontal bars.
- .5 Baseline: approved version of a work product that can be changed only through formal change control procedures and is used as a basis for comparison.
- .6 Budget: approved estimate for a project or work breakdown structure component or schedule activity.
- .7 Cash Flow: projection of progress payment requests based on cash loaded construction schedule.
- .8 Change Control: process whereby modifications to documents, deliverables, or baselines associated with a project are identified, documented, approved, or rejected.
- .9 Completion Milestones: they are firstly [Interim Certificate] [Substantial Completion] and secondly Final Certificate.
- .10 Constraint: scheduled limiting factor that effects execution of a project, program, portfolio, or process.

- .11 Contract: mutually binding agreement that obligates a seller to provide a specified product or service or result and obligates a buyer to pay for it.
- .12 Control: comparing actual performance with planned performance, analyzing variance, assessing trends, to effect process improvements, evaluating possible alternatives, and recommending appropriate corrective action as needed.
- .13 Corrective Action: intentional activity that realigns performance of project work with project management plan.
- .14 Critical Path: sequence of activities that represents longest path through a project, which determines shortest possible duration.
- .15 Critical Path Activity: activity on critical path in a project schedule.
- .16 Critical Path Method (CPM): method used to estimate minimum project duration and determine amount of scheduling flexibility on logical network of paths within schedule model.
- .17 Data Date: point in time when the status of the project is recorded.
- .18 Decomposition: technique used for dividing and subdividing project scope and project deliverables into smaller, more manageable parts.
- .19 Deliverable: unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project.
- .20 Duration: total number of work periods (not including holidays or other non-working periods) required to complete a schedule activity or work breakdown structure component.
 - .1 Usually expressed as workdays or work weeks.
- .21 Early Finish Date (EF): in Critical Path Method, earliest possible point in time when uncompleted portions of schedule activity can finish based on schedule network logic, data date, and schedule constraints.
 - .1 Early finish dates can change as Project progresses and changes are made to Project plan.
- .22 Early Start Date (ES): in Critical Path Method, earliest possible point in time when uncompleted portions of a schedule activity can start based on schedule network logic, data date, and schedule constraints.
 - .1 Early start dates can change as Project progresses and changes are made to Project Plan.
- .23 Execute: directing, managing, performing, and accomplishing project work; providing deliverables, and providing work performance information.
- .24 Finish Date: point in time associated with a schedule activity's completion.
 - .1 Usually qualified by one of following: actual, planned, estimated, scheduled, early, late, baseline, target, or current.
- .25 Float: (also known as slack) amount of time a schedule activity can be delayed without delaying early start date of a successor or violating a schedule constraint.
 - .1 This resource is available to both [PWGSC] and Contractor.

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- .26 Forecast: estimate or prediction of conditions and events in project future based on information and knowledge available at time of forecast.
- .1 Information is based on projects past performance and expected future performance, and includes information that could impact project in future, such as estimate at completion and estimate to complete.
- .27 Gantt Chart: see Bar Chart.
- .28 Impact Analysis: schedule analysis technique that adds a modeled delay to an accepted construction schedule to determined possible outcome of that delay on project completion.
- .29 Imposed Date: a fixed date imposed on a schedule activity or schedule milestone, usually in form of a “start no earlier than” and “finish no later than” date.
- .30 Lag: amount of time whereby a successor activity is required to be delayed with respect to a predecessor activity.
- .31 Late Finish Date (LF): in critical path method, latest possible point in time when uncompleted portions of a schedule activity can finish based on schedule network logic, project completion date, and schedule constraints.
- .32 Late Start Date (LS): in critical path method, latest possible point in time when uncompleted portions of a schedule activity can start based on schedule network logic, project completion date, and schedule constraints.
- .33 Lead: amount of time whereby a successor activity can be advanced with respect to a predecessor activity.
- .34 Logic Diagram: see Project network diagram.
- .35 Logical Relationship: dependency between two activities or between an activity and a milestone.
- .36 Master Schedule: summary-level schedule that identifies major deliverable; work breakdowns structure components, and key schedule milestones.
- .37 Milestone: significant point or event in a project, program, or portfolio.
- .38 Monitor: collect project performance data with respect to a plan, procedure performance measures, and report and disseminate performance.
- .39 Network: see Project Schedule Network Diagram.
- .40 Non-Critical Activities: activities which when delayed, do not affect specified Contract duration.
- .41 Project Control System: fully computerized system utilizing commercially available software packages.
- .42 Project Management: application of knowledge, skills, tools, and techniques, to project activities to meet project requirements.
- .43 Project Management Plan: approved document that describes how project will be executed, monitored, and controlled.
- .1 Primary uses of Project Management Plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope,

cost, and schedule baselines.

- .2 Project Management Plan may be summary or detailed.
- .44 Project Management Planning: development and maintenance of Project Management Plan.
- .45 Project Management Planning, Monitoring and Control System: overall system operated to enable monitoring of Project Work in relation to established milestones.
- .46 Project Schedule: planned dates for performing activities and planned dates for meeting milestones.
- .47 Project Schedule Network Diagram: graphical representation of logical relationships among project schedule activities.
 - .1 Always drawn from left to right to reflect Project chronology.
- .48 Project Scope: work performed to deliver a product, service, or result with specified features and functions.
- .49 Quantified days duration: Working Days based on 5 day work week, discounting statutory holidays.
- .50 Risk: uncertain event or condition that, if it occurs, has positive or negative effect on one or more project objectives.
- .51 Schedule: see Project Schedule.
- .52 Schedule Data: collection of information for describing and controlling schedule.
- .53 Scope: see Project Scope.
- .54 Start Date: point in time associated with activity's start, usually qualified by one of following: actual, planned, estimated, scheduled, early, late, target, baseline, or current.
- .55 Work Breakdown Structure (WBS): hierarchical decomposition of total scope of work to be carried out by project team to accomplish project objectives and create the required deliverables.

1.04 ADMINISTRATIVE REQUIREMENTS

- .1 Scheduling:
 - .1 Ensure that planning process is iterative and results in generally top-down processing with more detail being developed as planning progresses, and decisions concerning options and alternatives are made.
 - .2 Ensure Construction Schedule efficiencies through monitoring of Project in detail to ensure integrity of Critical Path, by comparing actual completions of individual activities with their scheduled completions, and review progress of activities that has started but are not yet completed.
 - .3 Monitor sufficiently often so that causes of delays can immediately be identified and mitigated.
- .2 Project monitoring and reporting:

- .1 Keep team aware of changes to schedule, and potential consequences as Project progresses.
- .2 Use narrative reports to provide advice on seriousness of challenges and measures to overcome them.
- .3 Begin narrative reporting with statement on general status of Project followed by summarization of delays, potential problems, corrective measures and Project status criticality.
- .3 Critical Path Method (CPM) Requirements:
 - .1 Ensure Construction Schedule is practical and remains within specified Contract duration.
 - .2 Submit Construction Schedule for Acceptant. If rejected, as schedule is deemed impractical by Consultant, revise and resubmit, until Acceptance is achieved.
 - .3 Change to Contract Duration:
 - .1 .1 Acceptance of Construction Schedule showing scheduled Contract duration shorter than specified Contract duration does not constitute a change to Contract.
 - .2 .2 Duration of Contract may only be changed through bilateral Agreement.
 - .4 Consider the Construction Schedule deemed practical by the Consultant, showing Work completed in less than specified Contract duration, to have float.
 - .5 First Milestone on Construction Schedule will identify start Milestone with an Early Start, "ES", constraint date equal to Award of Contract date.
 - .6 Calculate dates for completion of milestones from plan and Schedule using specified time periods for Contract.
 - .7 Calculations on updates such that if early finish of Ready for Takeover falls later than specified Contract duration then float calculation to reflect negative float.
 - .8 Delays to non-critical activities with float may not be basis for time extension.
 - .9 Do not use float suppression techniques such as software constraints, preferential sequencing, special lead/lag logic restraints, extended activity times or imposed dates other than required by Contract Documents.
 - .10 Allow for adverse weather conditions normally anticipated and show in Construction Schedule.
 - .1 Specified Contract duration has been predicated assuming normal amount of adverse weather conditions appropriate for the location of the Work.
 - .11 Provide necessary crews and manpower to meet schedule requirements for performing Work within specified Contract duration.

.1 Simultaneous use of multiple crews on multiple fronts on multiple critical paths may be required.

.12 Arrange participation on and off site of Subcontractors and suppliers, as required by the Consultant, for purpose of network planning, scheduling, updating and progress monitoring.

.1 Acceptance by the Consultant of original networks and revisions do not relieve Contractor from duties and responsibilities required by Contract Documents.

1.05 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit impact analysis of schedule for changes that result in extension of contract duration.

.1 Include draft Construction Schedule update and report as outlined in article "PROGRESS MONITORING AND REPORTING".

1.06 QUALITY ASSURANCE

.1 Use experienced personnel, fully qualified in planning and scheduling to provide services from start of construction to Ready for Takeover, including Commissioning.

1.07 WORK BREAKDOWN STRUCTURE (WBS)

.1 Prepare construction Work Breakdown Structure (WBS) within five (5) Working Days of contract award.

.1 Develop WBS through at least five levels: project, stage, element, sub-element and work package.

1.08 PROJECT MILESTONES

.1 Contractor shall include appropriate Milestones in accordance with the scope contained in the Contract Documents. At minimum, Milestones should be included, by station, for Shop Drawing start and end, construction start and end, testing and commissioning start and end, Substantial Performance of the Work and Ready for Takeover.

1.9 DETAILED CONSTRUCTION SCHEDULE

.1 Provide detailed project Construction Schedule (CPM logic driven) within ten (10) Working Days of Contract award date showing activity sequencing, interdependencies and duration estimates. In addition to the Milestones listed in 1.09.1, include listed activities as follows:

.1 Sequence for Shop Drawings.

.2 Samples.

- .3 Submittals and Consultant review period.
- .4 Procurement.
- .5 Construction.
 - .1 Site clearing.
 - .2 Site utilities.
 - .3 Foundation Work.
 - .4 Special Subcontractor Work.
 - .5 Equipment delivery and Installations.
 - .6 Finishes.
- .6 Installation.
- .7 Site works.
- .8 Testing.
- .9 Commissioning and Acceptance.
- .10 Line Closures and flagging
- .11 Any required permits
- .12 Installation of Protection of Finishings – Owner review prior to installation
- .2 Schedule should be Level 3, in form of a horizontal bar chart. “Level 3” means the level of detail required for a Project Control Schedule as set out in the AACE International Recommended Practice 37R-06 entitled, “Schedule Levels of Detail – As Applied in Engineering, Procurement and Construction”.
- .3 Detail CPM schedule to cover the activities in detail from Contract award date to Substantial Performance of the Work and Ready for Takeover.
- .4 Clearly show sequence and interdependence of construction activities and indicate:
 - .1 Start and completion of all items of Work, their major components, and interim milestone completion dates.
 - .2 Activities for procurement, delivery, installation and completion of each major piece of equipment, materials and other supplies, including:
 - .1 Time for Submittals, resubmittals and review.
 - .2 Time for fabrication and delivery of manufactured Products for Work.
 - .3 Delivery of Products Supplied by Others
 - .4 Interdependence of procurement and construction activities.

- .3 Include sufficient detail to assure adequate planning and execution of Work. Activities duration should be less than ten (10) Working Days.
- .6 Provide level of detail for Project activities such that sequence and interdependency of Contract Document tasks are demonstrated and allow co-ordination and control of Project activities. Show continuous flow from left to right.
- .7 Ensure activities with no float are calculated and clearly indicated on logical CPM construction network system as being, whenever possible, continuous series of activities throughout length of Project to form "Critical Path". Increased number of critical activities is seen as indication of increased risk.
- .8 Insert Change Orders in appropriate and logical location of Construction Schedule. After analysis, clearly state and report to Consultant for review effects created by insertion of new Change Order.

1.10 REVIEW OF CONSTRUCTION DETAIL SCHEDULE

- .1 Submit Construction Schedule in accordance with 01 32 00 Construction Progress Documentation.
- .2 Submittal of Construction Schedule indicates that it meets Contract Document requirements and will be executed generally in sequence.

1.11 COMPLIANCE WITH DETAIL SCHEDULE

- .1 Comply with Accepted Construction Schedule.
- .2 Proceed with significant changes and deviations from scheduled sequence of activities that cause delay, only after written receipt of Acceptance by Consultant.
- .3 Identify activities that are behind schedule and causing delay. Provide measures to regain slippage.
 - .1 Corrective measures may include:
 - .1 Increase of personnel with more experience/qualifications on site for effected activities or work package.
 - .2 Increase in materials and equipment.
 - .3 Overtime work and additional work shifts.
 - .4 Submit to Consultant, justification, Construction Schedule data and supporting evidence for approval of extension to Contract completion date or interim milestone date when required. As part of supporting evidence, include:
 - .1 Written submission of proof of delay based on revised activity logic, duration and costs, showing time impact analysis illustrating influence of each change or delay relative to approved Construction Schedule.

- .2 Prepared schedule indicating how change will be incorporated into overall logic diagram. Demonstrate perceived impact based on date of occurrence of change and include status of construction at that time.
- .3 Other supporting evidence requested by Owner and Consultant.
- .4 Do not assume approval of Contract extension prior to receipt of written Acceptance from Owner.
- .5 In event of Contract extension, display in Construction Schedule that scheduled float time available for Work involved has been used in full without jeopardizing earned float.
 - .1 Consultant will determine and advise Contractor number of allowable days for extension of Contract based on Construction Schedule updates for period in question, and other factual information.
 - .2 Construction delays affecting Construction Schedule will not constitute justification for extension of the Ready for Takeover date.

1.12 PROGRESS AND REPORTING

- .1 On an ongoing basis, the Contractor shall keep the Construction Schedule on job site to show “Progress to Date”. Arrange participation on and off site of Subcontractors and suppliers, as, and when necessary, for purpose of network planning, scheduling, updating and progress monitoring. Inspect Work with Consultant and or Owner at least once monthly to establish progress on each current activity shown on applicable networks.
- .2 Update and reissue project Work Breakdown Structure and relevant coding structures as project develops and changes.
- .3 Perform Construction Schedule update monthly with status dated (Data Date) on last date of month. Update to reflect activities completed to date, activities in progress, logic and duration changes.
- .4 Do not automatically update actual start and finish dates by using default mechanisms found in project management software.
- .5 Submit to Consultant copies of updated Construction Schedule.
- .6 Requirements for monthly progress monitoring and reporting are basis for progress payment request.
- .7 As part of the monthly progress report, in accordance with 01 32 00 – Construction Progress Documentation, include a written report based on the updated Construction Schedule, showing Work performed to date, comparing Work progress to planned, and presenting current forecasts. Report summarize progress, defining problem areas and anticipated delays with respect to Work schedule, and critical paths. Explain alternatives for possible schedule recovery to mitigate potential delay. Include in report:
 - .1 Description of progress made.

- .2 Pending items and status of: permits, Shop Drawings, Change Orders, possible time extensions.
- .3 Status of Contract Ready for Takeover and Milestones.
- .4 Current and anticipated problem areas, potential delays and corrective measures.
- .5 Review of progress and status of Critical Path activities.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 MEASUREMENT AND PAYMENT

- .2 Separate measurement or payment will not be made for Work required under this section. All costs in connection with the Work specified herein will be considered to be included with the related item of Work or incidental to the Work.

1.03 FREQUENCY OF PHOTOGRAPHIC DOCUMENTATION

- .1 The Contractor shall take photographs as indicated in Specification sections, at all construction milestones as identified in the Accepted Construction Schedule, and at each of the following stages of construction:
 - .1 Before commencement of clearing and demolition;
 - .2 Upon completion of clearing and demolition;
 - .3 Upon completion of excavation
 - .4 Upon completion of foundation and concrete work.
 - .5 Delivery and installation of Structural steel.
 - .6 Building Envelope Construction (roof, walls, doors, windows, etc.)
 - .7 Upon completion of any remedial Work.
 - .8 Upon completion of the Work.
 - .9 Anytime a problem arises that may result in a potential claim and the problem can be illustrated by photographs.
- .2 Furnish at least three different views or vantage points of each milestone and stage of construction. Furnish an average of 20 photographs each month until completion of the Work. Location of views shall be as agreed with the Consultant.
- .3 Contractor shall take photos at each shift and include photos in the daily report in accordance with section 01 32 00-Construction Progress Documentation.
- .4 Submit photos to the Consultant with the monthly progress reports in accordance with section 01 32 00-Construction Progress Documentation and other reports in accordance with Specification sections and Contract Documents.
- .5 Transfer photos to the Owner at the end of the Project.

1.04 QUALITY AND QUANTITY OF PHOTOGRAPHS

- .1 All photographs shall be digital photographs in pdf, jpg or png format with the following requirements:
 - .1 Minimum resolution: 1024 x 768 pixels.

- .2 Colors: 24 Bits per Pixel.
 - .3 Maximum File size of 3MB.
- .2 Digital photographs provided shall use the following file naming convention:

PYYMMDDLOCATIONSEQ.EXT

P = Photograph

YYMMDD = Date in Year, Month, Day format

LOCATION = (8 Characters maximum) Location taken, either by BART 3-character alpha numeric + 5, or Milepost by line designation. (e.g. M90, C40-west, A1MP32-1, etc.)

SEQ = Sequential number from 001 to 999.

EXT = File extension (e.g. pdf, jpg, or png).

- .3 If flash drives are used to store photos they shall be labeled to include the Contract number and the date the photographs were taken.

1.05 IDENTIFICATION OF PHOTOGRAPHS

- .1 The following information shall be furnished for each digital photograph in a manner approved by the Owner.
 - .1 Title of Contract and Contract Number;
 - .2 Site location.
 - .3 Identification of subject shown;
 - .4 Station point of camera and direction of view;
 - .5 Time and date taken.

1.06 VIDEO RECORDINGS

- .1 The Contractor shall provide video recordings to supplement Contract photographs of certain construction milestones as identified in the Accepted Construction Schedule, and events as indicated herein:
 - .1 Start of construction, including clearing and demolition operations, as applicable;
 - .2 Highlights of all formal inspections; and
 - .3 Highlights of the final inspection and acceptance by the Owner and Consultant and Authority having jurisdiction.
 - .4 Video recordings shall be at minimum standard definition (480p).
- .2 Video recordings shall include an unobtrusive time and date indicator on the film, accurately depicting the time and date when the photography was performed.
- .3 If flash drives are used to store videos they shall be labeled to include the Contract number and the date the video was taken.
- .4 Individual digital video files shall use the file naming convention indicated above, paragraph 1.03.2, however the filename shall be modified such that the first character shall be "V" for video instead of "P".

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 32 33 – Photographic Documentation
- .2 Section 01 43 00 - Quality Assurance.

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Submit to the Consultant Submittals listed in Specifications for review and Acceptance. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by Submittal until review is complete and Acceptance has been provided.
- .3 Present Shop Drawings, Product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review Submittals before submission to the Consultant. Stamp Submittals as “Approved by Contractor” prior to submitting to the Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each Submittal has been checked and coordinated with requirements of Work and Contract Documents and Contractors own quality procedures. Submittals not stamped, signed, dated and identified as to specific Project will be returned without being examined and considered rejected.
- .6 Notify the Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify site measurements and affected adjacent Work are coordinated.
- .8 Keep one Accepted copy of each Submittal on site.

1.04 SHOP DRAWINGS, PRODUCT DATA AND OTHER SUBMITTALS

- .1 Refer to CCDC 2 GC 3.8 Shop Drawings and Supplementary General Conditions.
- .2 Refer to Specifications for all other required Submittals.
- .3 Submit for review and Acceptance Shop Drawings stamped and signed by professional engineer licensed in Province of Ontario, Canada.
- .4 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and

- installed. Indicate cross references to Contract Drawings and Specifications.
- .5 Allow ten (10) Working Days for Consultant review of each Submittal, unless otherwise specified.
 - .6 Adjustments requested on Shop Drawings by the Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to the Consultant and do not proceed with Work. Such adjustment shall be approved by a Change Directive or Change Order issued by the Owner in accordance with the Contract Documents.
 - .7 Make changes in Shop Drawings as the Consultant may require, consistent with Contract Documents. When resubmitting, notify the Consultant in writing of revisions other than those requested.
 - .8 Accompany Submittals with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each Shop Drawing, Product data, and sample.
 - .5 Other pertinent data.
 - .9 Submittals to include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of site measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified site dimensions and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.

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- .10 Material being supplied, all connections, attachments, anchorages and locations of exposed fastenings as applicable.
 - .11 Typical and special installation conditions, including setting or erection details.
 - .12 Relationship to adjacent work.
 - .13 Copy of associated Project warranty.
- .10 After the Consultant review and Acceptance, distribute copies.
 - .11 Submit electronic copy of Shop Drawings for requirements requested in Specifications and as the Consultant may reasonably request. Submit electronic copies of Product data sheets or brochures for requirements requested in Specifications and as requested by the Consultant where Shop Drawings will not be prepared due to standardized manufacture of Product.
 - .1 Product data: manufacturers' catalogue sheets, MSDS sheets, brochures, literature, performance charts and diagrams used to illustrate standard manufactured products or any other specified information.
 - .2 Delete information not applicable to Project.
 - .3 Supplement standard information to provide details applicable to Project.
 - .4 Cross-reference Product data information to applicable portions of Contract Documents.
 - .12 Submit electronic copies of test reports for requirements requested in Specifications and as requested by the Consultant.
 - .1 Report signed by authorized official of testing laboratory that material, Product or system identical to material, Product or system to be provided has been tested in accord with specified requirements.
 - .13 Submit electronic copies of certificates for requirements requested in Specifications and as requested by the Consultant.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of Product, system or material attesting that product, system or material meets Specification requirements.
 - .2 Certificates must be dated after the award of the Contract, complete with the Project name.
 - .14 Submit electronic copies of manufacturers' instructions for requirements requested in Specifications and as requested by the Consultant.
 - .1 Pre-printed material describing installation of Product, system or material, including special notices and Safety Data Sheets concerning impedances, hazards and safety precautions.
 - .15 Submit electronic copies of manufacturer's site reports for requirements requested in Specifications and as requested by the Consultant.
 - .1 Material describing installation of Product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
 - .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

- .17 Submit electronic copies of Operation and Maintenance Data for requirements requested in Specifications and as requested by Owner, after a review of an electronic copy has been completed and Accepted by the Consultant.
 - .1 Submit four (04) hard copies, unless otherwise specified, of reviewed and Accepted Operation and Maintenance Data.
- .18 Delete information not applicable to Project.
- .19 Supplement standard information to provide details applicable to Project.
- .20 If upon review by the Consultant, no major corrections are requested, electronic copies will be returned as Accepted or Accepted with comments (in the case of minor corrections) and fabrication and installation of Work may proceed. Requested minor corrections shall be made in a timely manner. If Shop Drawings are rejected, noted copy will be returned and resubmission of corrected Shop Drawings for review and Acceptance, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .21 Acceptance of the Shop Drawings does not mean confirmation that the Submittal does not include errors or omissions, defects or deficiencies.

1.05 SAMPLES

- .1 Submit for review and Acceptance samples in duplicate as requested in respective Specifications. Label samples with origin and intended use.
- .2 Deliver samples prepaid to the Consultant at the address provided during the Pre-Construction Meeting.
- .3 Notify the Consultant in writing at the time of submission of deviations in samples from the requirements of Contract Documents. Deviations may be rejected and the Contractor shall resubmit either a sample compliant with the Contract Documents or an alternative sample with written deviations.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by the Owner or the Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to the Consultant and do not proceed with Work. Such adjustment shall be approved by a Change Directive or Change Order issued by the Owner.
- .6 Make changes in samples which the Consultant may require, consistent with Contract Documents.
- .7 Reviewed and Accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.06 MOCK-UPS

- .1 Erect mock-ups in accordance with section 01 43 00 - Quality Assurance.

1.07 PHOTOGRAPHIC DOCUMENTATION

- .1 Submit electronic colour digital photography in accordance with section 01 32 33 –

Photographic Documentation, Contract Documents, and as directed by the Consultant.

- .2 Provide photographs in the requested format to demonstrate progress and how deficient items identified within the Consultant review and inspection reports have been corrected.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
 - .1 R.S.C., 1985, c. L-2
- .2 Province of Ontario
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. [1990, c.0.1, as amended and O. Reg. 213/91 as amended] - Updated August 8, 2023.
- .3 National Building Code of Canada (NBC):
 - .1 Part 8, Safety Measures at Construction and Demolition Sites.
- .4 The Canadian Electric Code (as amended)
- .5 Canadian Standards Association (CSA) as amended:
 - .1 CSA Z797-2009 Code of Practice for Access Scaffold.
 - .2 CSA S350-M1980 (R2003) Code of Practice for Safety in Demolition of Structures.
 - .3 CSA Z462- Workplace Electrical Safety Standard.
- .6 National Fire Code of Canada 2015 (as amended)
 - .1 Part 5 – Hazardous Processes and Operations and Division B as applicable and required.
- .7 American National Standards Institute (ANSI):
 - .1 ANSI A10.3, Operations – Safety Requirements for Powder-Actuated Fastening Systems.
- .8 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 31 19 – Project Meetings
- .2 Section 01 33 00 - Submittal Procedures
- .3 Section 01 35 43 – Fire Safety Requirements
- .4 Section 01 35 43 - Environmental Procedures
- .5 Section 01 51 00 - Temporary Utilities

- .6 Section 01 56 00 - Temporary Barriers and Enclosures
- .7 ONTC Contractor Subcontractor Policy.
- .8 ONTC HOT WORK Program.
- .9 ONTC Electrical Safety Policy.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit for Acceptance Project-specific Health and Safety Plan within seven (7) Working Days after Contract award and fifteen (15) Working Days prior to commencement of Work on site. Health and Safety Plan must include:
 - .1 Results of site-specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
 - .3 Emergency Procedures.
- .3 The Consultant's review and Acceptance of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .4 Submit electronic copies of Contractor's authorized representative's work site health and safety inspection reports to the Owner and the Consultant, and Authority Having Jurisdiction (AHJ) when required.
- .5 Submit to the Owner and the Consultant copies of reports or directions issued by health and safety inspectors of the Authority Having Jurisdiction (AHJ).
- .6 Submit to the Owner and the Consultant electronic copies of incident and accident reports.
- .7 Submit to the Consultant WHMIS Safety Data Sheets (SDS) and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements. Include and update the Health and Safety Plan as required.
- .8 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit to the Consultant certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel.
- .9 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.04 FILING OF NOTICE

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.
- .2 Provide copies of all notices to the Consultant.

- .3 Contractor shall agree to install proper site separation and identification in order to maintain time and space at all times throughout life of Project.

1.05 SAFETY ASSESSMENT

- .1 Conduct a site-specific hazard assessment based on review of Contract Documents, required Work, and Project site. Identify any known and potential health risks and safety hazards.
- .2 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications and , include, but not be limited to, the following:
 - .1 Primary requirements:
 - .1 Contractor's and ONTC safety policy.
 - .2 Identification of applicable compliance obligations.
 - .3 Definition of responsibilities for Project safety; include an organization chart for Project with safety responsibilities clearly indicated.
 - .4 General safety rules for Project.
 - .5 Job-specific safe work procedures.
 - .6 Inspection policy and procedures.
 - .7 Incident reporting and investigation policy and procedures.
 - .8 Occupational Health and Safety Committee/Representative procedures.
 - .9 Occupational Health and Safety meetings.
 - .10 Occupational Health and Safety communications and record keeping procedures.
 - .2 Summary of health risks and safety hazards resulting from analysis of hazard assessment, with respect to site tasks and operations which must be performed as part of the Work.
 - .3 List hazardous materials to be brought on site as required by Work.
 - .4 Indicate engineering and administrative control measures to be implemented at the Place of Work for managing identified risks and hazards.
 - .5 Identify personal protective equipment (PPE) to be used by workers.
 - .6 Identify personnel and alternates responsible for site safety and health.
 - .7 Identify personnel training requirements and training plan, including site orientation for new workers.

- .3 Develop the plan in collaboration with all Subcontractors. Ensure that work/activities of Subcontractors are included in the hazard assessment and are reflected in the plan.
- .4 Revise and update Health and Safety Plan as required, and re-submit for Acceptance in accordance with 01 33 00 – Submittal Procedures
- .5 Review and Acceptance: the review and Acceptance of site-specific Health and Safety Plan shall not relieve the Contractor of responsibility for errors or omissions in final site-specific Health and Safety Plan or of responsibility for meeting all requirements of construction and Contract Documents.

1.06 MEETINGS

- .1 Schedule and administer Health and Safety meeting with the Owner and the Consultant prior to commencement of Work. This meeting shall be included in the Pre-construction Meeting.
- .2 Attend all subsequent Health and Safety meetings called by the Owner or the Consultant.

1.07 REGULATORY REQUIREMENTS

- .1 Conduct the Work in accordance with Section 01 41 00 - Regulatory Requirements.

1.08 PROJECT/SITE CONDITIONS

- .1 Work at site may involve contact with:
 - .1 Public.
 - .2 ONTC employees.
 - .3 Other contractors and consultants.
 - .4 Third Party Property Owner.
- .2 The Contractor is solely responsible for all utility detection and clearances prior to starting the Work.
- .3 The Contractor will not rely solely upon the Drawings or other information provided for utility locations.
- .4 Carry out any activities involving asbestos in accordance with applicable Provincial / Federal Regulations.
- .5 Removal and handling of asbestos will be in accordance with applicable Provincial / Federal Regulations.
- .6 Refer to reports in Attachment 1 to the Specifications for further site conditions and assessment reports for any noted hazardous or contaminated materials or substances present at Place of the Work. Contractor should their own assessments prior to commencing Work.

1.09 GENERAL REQUIREMENTS

- .1 In accordance with 01 56 00 – Temporary Barriers and Enclosures, provide safety barricades and lights around work site as required to provide a safe working environment for workers and protection for pedestrian and vehicular traffic.
- .2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.
 - .1 Provide appropriate means by use of barricades, fences, warning signs, traffic control personnel, and temporary lighting as required.

1.10 RESPONSIBILITY

- .3 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .4 Contractor will be responsible and **assume the role of Constructor** as described in the Ontario Occupational Health and Safety Act and Regulations for Construction Projects.
- .5 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .6 Provide first aid, hygiene, and medical facilities at the Place of the Work in accordance with requirements of provincial and local governmental occupational health, safety, and workers' compensation statutes, public health guidance publications (where warranted) and Contract Documents.

1.11 COMPLIANCE REQUIREMENTS

- .1 Comply with Ontario Occupational Health and Safety Act, R.S.O. 1990, c. 0.1 and Ontario Regulations for Construction Projects, O. Reg. 213/91.
- .2 Comply with all Federal and Provincial laws relating to Health and Safety including Acts and Regulations as well as Lower Tier Municipality By-Laws.
- .3 Comply with all applicable industry safety standards.
- .4 Comply with legislative requirements for work performed including, but not limited to:
 - .1 Qualifications of workers;
 - .2 Training;
 - .3 Supervision, and;
 - .4 Use of onsite equipment.
- .5 Provide any and all personal protective equipment for Contractor's own workers where prescribed by legislation.

1.12 UNFORSEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard or condition become evident during performance of the work, immediately stop work and advise Contractor's nominated Health and Safety Coordinator and follow procedures in accordance with Acts and Regulations of Province having jurisdiction and advise the Consultant verbally and in writing.

1.13 CONTRACTOR HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator. Health and Safety Coordinator must:
 - .1 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel that do not successfully complete required training are not permitted to enter site to perform Work.
 - .2 Maintain a training record/log of Contractor employee including all Subcontractors, suppliers and other parties retained by the Contractor for the execution of the Work, at the jobsite and electronic copy, available for the Owner and the Consultant review at request.
 - .3 Be responsible for implementing, revising, enforcing daily and monitoring site-specific Contractor's site-specific Health and Safety Plan.
 - .4 Visit each Place of the Work regularly, at least biweekly or as required by health and safety laws and regulations, to ensure Work is being completed in compliance with Contractor's Health and Safety programs and all applicable laws and regulations.
- .2 Contractor's nominated site supervisor may complete some of daily tasks of the Health and Safety Coordinator provided the site supervisor has the proper qualifications to complete those tasks.

1.14 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Ontario having jurisdiction, and in consultation with the Consultant.
- .2 Post legible versions of the following documents on site:
 - .5 Site Specific Health and Safety Plan.
 - .6 Sequence of work.
 - .7 Emergency procedures.
 - .8 Site drawing showing Project layout, locations of the first-aid station, marshalling stations, and emergency transportation provisions.
 - .9 Notice of Project.
 - .10 Site plans.

- .11 Notice as to where a copy of the Workers' Compensation Act and Regulations is available on the work site for review by employees and workers.
- .12 Workplace Hazardous Materials Information System (WHMIS) documents.
- .13 WHMIS Safety Data Sheets (SDS).
- .14 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.
- .15 Others as required.

1.15 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by Authority Having Jurisdiction (AHJ), the Consultant or by Owner.
- .2 Provide the Consultant with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 The Owner or the Consultant may stop Work if non-compliance of health and safety regulations is not corrected. The Contractor/Subcontractors will be responsible for any costs arising from such a "stop work order".

1.16 BLASTING

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by the Owner.

1.17 POWDER ACTUATED DEVICES

- .1 Use powder-actuated devices only after receipt of written permission from Owner.

1.18 ELECTRICAL SAFETY REQUIREMENTS

- .1 Comply with authorities and ensure that, when installing new facilities or modifying existing facilities, all electrical personnel are completely familiar with existing and new electrical circuits and equipment and their operation.
- .2 Before undertaking any Work, coordinate required energizing and de-energizing of new and existing circuits with the Owner.
- .3 Maintain electrical safety procedures and take necessary precautions to ensure safety of all personnel working under this Contract, as well as safety of other personnel on site.

1.19 ELECTRICAL LOCKOUT

- .1 Develop, implement and enforce use of established procedures to provide electrical lockout and to ensure the health and safety of workers for every event where work must be done on any electrical circuit or facility.
- .2 Prepare the lockout procedures in writing, listing step-by-step processes to be followed by workers,

including how to prepare and issue the request/authorization form. Have procedures available for review upon request by the Owner or the Consultant.

- .3 Keep the documents and lockout tags at the site and list in a logbook for the full duration of the Contract. Upon request, make such data available for viewing by the Owner, the Consultant or by any authorized safety representative.

1.20 HOT WORK:

- .1 Hot Work Permit will be required; Contractor must notify the Owner five (5) Working Days in advance prior to any hot work activities and provide, for review, a completed Hot Work permit form including a plan to mitigate any risks identified by the Contractor in their job hazard analysis. Hot Work shall proceed only after receiving the Owner's approval.

1.21 SILICA

- .1 Preventive measures to apply to the work site:
 - .1 Source reduction methods
 - .1 Work in wet environment or use tools with inflow of water in order to reduce dustiness, if not, collect dust at the source and retain it with a high efficiency filter not to propagate dust in the environment.
 - .2 Clean surfaces and tools with water, never with compressed air.
 - .3 Sand and pickle surfaces by using an abrasive containing less than 1 % of silica.
 - .4 When required, install shields or other containment device to prevent silica dust from migrating toward other workers or the public.
 - .2 Protection: Wear respiratory protection equipment (mask) during all operations that could generate silica dust.

1.22 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 National Research Council of Canada (NRC):
 - 1. National Building Code of Canada (NBC).
 - 2. National Fire Code of Canada (NFC).
- .2 National Fire Protection Association (NFPA):
 - 1. NFPA 51B-[19], Standard for Fire Prevention During Welding, Cutting, and Other Hot Work.
- .3 Ontario Fire Code.
- .4 Ontario Occupational Health and Safety Act R.S.O 1990
- .5 O.Reg 213/91 Construction Projects
- .6 Canada Labour Code R.S.C., 1985 c L-2
- .7 Canada Occupational Health and Safety Regulations SOR/86-304
- .8 Canadian Construction Documents Committee (CCDC)
 - 1. CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 35 29.06 – Health and Safety Procedures
- .2 Section 01 33 00 – Submittal Procedures
- .3 Section 01 74 19 – Waste Management and Disposal
- .4 ONTC Contractor Subcontractor Policy
- .5 ONTC HOT WORK Program

1.03 CONSTRUCTION FIRE SAFETY

- .1 Contractor is responsible for construction fire safety in accordance with national and provincial codes, laws and regulations.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit fire safety plan for Acceptance before construction commences.

1.05 REPORTING FIRES

- .1 Be aware at all times of nearest fire alarm pull station location, nearest telephone, and

emergency phone number.

- .2 Report fire incidents to Fire Department immediately in the following sequence:
 - .1 Activate nearest fire alarm pull station, if any.
 - .2 Telephone the Fire Department then Owner
 - .1 Telephone:911.
 - .2 Contact Owner at ONTC RTC Hotline # 1-800-558-4129.
- .3 Person activating fire alarm pull station to remain at main site entrance and direct Fire Department personnel to location of fire.
- .4 When reporting a fire by telephone, give location of fire, building name or number, and be prepared to give basic directions (e.g., northeast corner of base compound, visual reference points).
- .5 Promptly inform Owner and Consultant of fire incidents at Place of Work, regardless of size.

1.06 FIRE SAFETY PLAN

- .1 Prepare a fire safety plan in cooperation with the local fire department and other applicable regulatory authorities for each Place of Work before beginning Work on site.
- .2 Submit fire safety plan to the Consultant for Acceptance who may submit to local fire department for their review.
- .3 Limit scope of fire safety plan to the Place of the Work only. Existing fire safety plans covering other existing buildings are not the responsibility of the Contractor.
- .4 Prepare fire safety plan in conformance with NFC. Include:
 - .1 Emergency procedures in case of fire, including:
 - .1 sounding fire alarm
 - .2 notifying fire department
 - .3 instructing occupants on procedures to follow when fire alarm sounds.
 - .4 evacuating occupants, including special provisions for persons requiring assistance
 - .5 confining, controlling, and extinguishing the fire.
 - .2 Appointment and organization of designated supervisory staff to carry out fire safety duties.
 - .3 Training of supervisory staff and other occupants in their responsibilities for fire safety
 - .4 Documents, including diagrams, showing type, location, and operation of building fire emergency systems.
 - .5 Holding of fire drills
 - .6 Control of fire hazards in the building
 - .7 Inspection and maintenance of building facilities provided for the safety of occupants.

- .5 Post fire safety plan at each entrance to Place of the Work or near each Place of the Work's health and safety board.
- .6 Review fire safety plan a maximum of every three (03) months to ensure it takes into account changes in the use and other characteristics of the building or site. Revise fire safety plan when it can be improved.

1.07 FIRE PROTECTION SYSTEM IMPAIRMENT

- .1 Maintain existing fire protection systems in an operational state at all times during construction.
- .2 Use of fire hydrants, standpipes, or hose systems for purposes other than firefighting is prohibited.
- .3 Existing fire protection and alarm systems will not be obstructed, shut off, disabled, or left inactive at end of each Working Day or shift without written authorization from the Owner.
- .4 Submit a written request to the Owner and the Consultant for approval ten (10) Working Days in advance of planned interruption of services. Submit written notification for operation including shutting down active fire protection system, including water supply, fire suppression, fire detection, and life safety systems.
- .5 Where an existing fire protection system that provides fire alarm monitoring becomes impaired in an existing building, provide a fire watch as directed by the Consultant.
- .6 Where systems are affected or impaired during the Work, conduct Work on fire protection system in accordance with NFC.

1.08 TEMPORARY PORTABLE FIRE EXTINGUISHERS

- .1 Provide portable extinguishers, or as otherwise directed by Fire Department.
- .2 Provide supplemental portable extinguishers to the following areas or as otherwise directed by Fire Department :
 - .1 Adjacent to hot works
 - .2 Areas where combustibles materials are stored
 - .3 Adjacent to areas where flammable liquids or gases are stored or handled
 - .4 Near or on internal combustion engines
 - .5 Adjacent to temporary oil fired or gas fired equipment
 - .6 Adjacent to bitumen heating equipment
 - .7 Adjacent to each roof installation or repair work area
- .3 Provide portable extinguishers classified and rated as 10-A:80B:C, minimum 20 pounds unless otherwise directed by the Fire Department.
- .4 Provide dry chemical type extinguishers unless otherwise required by hazard being protected.
- .5 Provide a sufficient number of portable extinguishers as per codes and laws requirements.
- .6 Inspect and maintain extinguishers in accordance with NFC.

1.09 ACCESS FOR FIRE FIGHTING

- .1 Provide and maintain access for firefighting operations in accordance with NFC.
- .2 Submit written request to the Owner and the Consultant for approval a minimum of ten (10) Working Days before operation of activities that may cause problems that might impede fire department equipment access and personnel response, including but not limited to:
 - .1 violation of minimum horizontal and overhead clearances
 - .2 erecting of barricades and digging of trenches.

Note: Access routes are intended for the movement of fire department vehicles around buildings. Access aisles and access paths are intended for the movement of fire department personnel inside a building.

- .3 Maintain a minimum 6.0-m clear horizontal width for access routes, or as otherwise directed by the Consultant.
- .4 Maintain a minimum 5.0-m vertical clearance for access routes, or as otherwise directed by the Consultant.

1.10 SMOKING RESTRICTIONS

- .1 Smoking is prohibited in buildings, including buildings under construction.
- .2 Obey posted signs and restrict smoking to only existing designated smoking areas. Obey posted smoking restrictions near existing buildings.
- .3 Provide a temporary approved non-combustible receptacle at each designated smoking area in accordance with the Fire Safety Plan.

1.11 WASTE MANAGEMENT

- .1 Manage waste in accordance with Section 01 74 19 – Waste Management and Disposal, and as follows:
 - .1 Minimize waste materials.
 - .2 Do not burn waste materials.
 - .3 Remove waste from Place of Work at end of each Working Day or shift, or more frequently when directed by Fire Department.
 - .4 Storage:
 - .1 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
 - .2 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles. Remove at end of each Working Day.
 - .5 Provide temporary waste bins no closer than 3.0 m to buildings.

1.12 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 Handle, store, and use flammable and combustible liquids in accordance with NFC or as otherwise directed by the Fire Department.
- .2 Store flammable and combustible liquids such as gasoline, kerosene, and naphtha in quantities not exceeding 45 litres. Store in approved safety cans bearing Underwriters' Laboratory of Canada or Factory Mutual approved certification mark. Obtain written authorization from Owner for storage of quantities of flammable and combustible liquids exceeding 45 litres.
- .3 Transfer of flammable or combustible liquids within buildings or on jetties is prohibited.
- .4 Transfer of flammable or combustible liquids in vicinity of open flames or any type of heat-producing device is prohibited.
- .5 Use of flammable liquids having a flash point below 38 degrees C such as naphtha or gasoline as solvents or cleaning agents is prohibited.
- .6 Storing flammable and combustible waste liquids on site is prohibited. Remove daily or more frequently as directed by Fire Department.

1.13 HOT WORKS

- .1 Implement a hot works program in accordance with NFC, FMD 4004, and NFPA 51B. Apply Hot Works program to processes involving welding, cutting, roofing, and other hot works when directed by Owner or the Consultant.
- .2 In accordance with Section 01 35 29.06 - Health And Safety Requirements, obtain a Hot Works permit 72 hours in advance from Owner for Hot Works in work area. Frequency of renewal for Hot Works permits is at discretion of the Owner.
- .3 Provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for fire watch is at discretion of the Owner or the Consultant.
- .4 Provide fire watch service as required. Provide fire watchers trained in use of fire extinguishing equipment.
- .5 Carry out hot works processes in areas free of combustible and flammable content.
- .6 Where hot works must be carried out in areas where combustibles are present:
 - .1 Protect flammable and combustible materials within 15.0 m of hot works in accordance with NFC.
 - .2 Provide a fire watch during hot works and for a minimum of 60 minutes after work is complete, unless otherwise directed by the Consultant.
 - .3 Conduct a final inspection of area not less than 4 hours after completion of hot works, unless otherwise directed by the Consultant.
- .7 Where there is a possibility of sparks leaking onto combustible materials in areas adjacent to areas where the hot works is carried out:
 - .1 Cover or close openings in walls, floors, or ceilings to prevent passage of sparks to such adjacent areas.

- .2 Provide a fire watch during hot works, and a minimum 60 minutes after hot works is complete.
- .3 Conduct a final fire watch inspection not less than 4 hours after hot works is complete, unless otherwise directed by the Consultant.
- .8 Protection of flammable or combustible materials:
 - .1 Remove flammable and combustible materials including combustible or flammable dust or residue from area where hot works is carried out.
 - .2 When removal is not possible, protect materials with a non-combustible covering.
- .9 Provide a temporary fire extinguisher within 3.0 m of hot works, minimum size of 20 lbs Type ABC extinguisher, unless otherwise directed by the Owner or the Consultant.

1.14 HAZARDOUS SUBSTANCES

- .1 Perform Work involving the use of toxic or hazardous materials, chemicals or explosives, or otherwise creating hazard to life, safety or health, in accordance NFC.
- .2 Provide temporary mechanical ventilation where flammable liquids, such as lacquers or urethanes are used. Eliminate sources of ignition. Provide written notification to the Consultant a minimum of five (5) Working Days before starting Work and immediately at completion of Work.

1.15 QUESTIONS OR CLARIFICATION

- .1 Direct questions and requests for clarification on Fire Safety to the Consultant.
- .2 The Owner or the Consultant will obtain clarifications from Fire Department. Do not contact Fire Department directly for notification, authorization, or any requests unless situation constitutes an immediate emergency.

1.16 FIRE INSPECTION

- .1 Coordinate site inspections by Fire Department through the Consultant.
- .2 Allow Fire Fighter unrestricted access to Place of Work.
- .3 Cooperate with Fire Department during routine fire safety inspection of Place of work.
- .4 Immediately remedy unsafe fire situations observed by Fire Department.

END OF SECTION

1 GENERAL**1.01 REFERENCE STANDARDS**

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 SUMMARY

- .1 The Work of this Section includes, but is not limited to the following:
 - .1 Hazardous Substances
 - .2 Environmental Protection
 - .3 Archaeology and Cultural Heritage
 - .4 Excess Soil Management
 - .5 Other Environmental Matters

1.03 GENERAL REQUIREMENTS

- .1 Assume responsibility for the protection of the environment and the preservation of public health, in the course of and as affected by the Work of the Contract, in accordance with specified requirements and Environmental Laws, ordinances, rules, regulations, codes and orders of the authorities that have regulatory oversight of or authority over the Work ("Authorities having Jurisdiction")
- .2 Give required notices and follow procedures set out by Authorities having Jurisdiction (AHJ) when working adjacent to or in waterways.
- .3 Give required notices and follow procedures set out by Authorities having Jurisdiction when handling or encountering hazardous, toxic, controlled substances (hereinafter referred to as hazardous substances).
- .4 The following conditions shall be regarded as a hazard to the environment, requiring appropriate action within the scope of this Section:
 - .1 Presence of friable asbestos.
 - .2 Presence of abandoned or disused equipment such as fuel tanks, PCB containing equipment and materials (including in-ground hydraulic hoists), batteries, septic tanks, grease / oil interceptors.
 - .3 Erosion, sedimentation and general disturbance of ecosystems.
 - .4 Other conditions identified by environmental jurisdictional authorities.
 - .5 Designated Substances and Hazardous Substance

1.04 DEFINITIONS

- .1 "Canadian Environmental Protection Act, 1999 (Canada)" means the Canadian Environmental Protection Act, 1999, S.C. 1999, c. 33, as amended from time to time;
- .2 "Designated Substances and Hazardous Substance" includes,
 - .1 a Hazardous Substance;
 - .2 those substances identified by Ontario Regulation 490/09 and Ontario Regulation 278/05 as amended, under the Occupational Health and Safety Act (Ontario);
 - .3 those substances identified and regulated under Part X Hazardous Substances, Can. Regulation 86-304, Canadian Occupational Health

- and Safety Regulations;
- .4 substances that are identified as falling under identified categories as part of the Workplace Hazardous Materials Information System (WHMIS) or GHS for Hazardous Substances under provincial or federal occupational health and safety legislation;
 - .5 polychlorinated biphenyls as identified in Ontario Regulation 362, as amended under the Environmental Protection Act (Ontario) and the PCB Regulations (SOR/2008-273), as amended, adopted under the Canadian Environmental Protection Act, 1999 (Canada); and
 - .6 mould, acrylonitrile, arsenic, asbestos (including asbestos-containing materials), benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica, and vinyl chloride;
- .3 “Discharge” means any spill, release, discharge, emission, spraying, injection, inoculation, abandonment, deposit, leak, seep, pour, emptying, throwing, dumping, placing and exhaust to the environment of any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination thereof, either directly or indirectly from human activities that causes or may cause an adverse effect on the environment, or that has not been authorized by the applicable Environmental Approvals;
 - .4 “Environmental Approvals” means any permit, certificate, registration, license, approval, ruling, variance, exemption or similar requirement relating to environmental matters or other authorization required under Environmental Laws;
 - .5 “Environmental Consultant” means a reputable, qualified and experienced environmental consulting or engineering firm employing individuals that has been retained by the Contractor to provide technical expertise and guidance to the Contractor on all the Contractor environmental obligations, the Environmental Approvals and all other environmental obligations and matters, including monitoring, managing and addressing soil and groundwater impacts and occupational health and safety;
 - .6 “Environmental Laws” means:
 - .1 all federal laws, statutes, by-laws, rules, regulations, orders, ordinances or other requirements having the force of law relating to the protection of the environment or wildlife, natural or cultural resources, archeological and heritage sites, human health or safety, or Hazardous Substances;
 - .2 all provincial regional and municipal laws, statutes, by-laws, rules, regulations, orders, ordinances or other requirements having the force of law relating to the protection of the environment or wildlife, natural or cultural resources, archeological and heritage sites, human health or safety, or Hazardous Substances.
 - .7 “Environmental Protection Act (Ontario)” means the Environmental Protection Act, R.S.O. 1990, c. E. 19, as amended from time to time;
 - .8 “Hazardous Waste” means a “hazardous waste” as such term is defined pursuant to R.R.O 1990, Regulation 347;
 - .9 “MECP” means the Ontario Ministry of the Environment and Conservation and Parks, and any successor ministry thereto;
 - .10 “Ontario Water Resources Act (Ontario)” means the Ontario Water Resources Act, R.S.O. c. O.40, as amended from time to time;
 - .11 “Qualified Person”, as defined in O. Reg. 153/04, as amended
 - .12 “Spill” means, for the purposes of this Project and notwithstanding any less stringent definition under Environmental Laws, a Discharge that,

- .1 arises, either directly or indirectly, from human activities; and
 - .2 causes or may cause an adverse effect on the environment.
- .13 “Soil with Environmental Contaminants” means soil or sediment that is considered to be contaminated, i.e., if the quality exceeds the applicable Ministry of the Environment, Conservation and Parks (MECP) Generic Site Condition Standards at the Site for use under Part XV.1 of the Environmental Protection Act (Ontario) (O. Reg. 153/04) or site-specific standards approved by MECP.
- .14 “Substances Posing Significant Hazard” means any biological, chemical or physical agent or combination thereof to which exposure of a worker is prohibited, regulated, restricted, limited or controlled by the occupational health and safety enforcement agency of the province/ territory where the Work is to be performed. Should no such provisions be in place in the province/territory where the Work is to be performed, the following substances shall be considered as “Substances Posing Significant Hazard”: Asbestos, Silica, Mercury, Lead, Arsenic, Acrylonitrile, Benzene, and Isocyanates.”

1.05 HAZARDOUS SUBSTANCES

- .1 Submit documentation to the Consultant to show that all Subcontractors have been provided with lists of the Substances Posing Significant Hazard on site. This list must include the name of the substances indicated by the Owner to be on site and any such substance to be used or produced by the Contractor or subcontractors on site during the life of the Work.
- .2 Procedures:
 - .1 Known Conditions: Follow specified requirements in Contract Documents. Review existing site conditions and identify, in writing, to the Consultant, any conditions that differ materially from those indicated in the Contract Documents.
 - .2 Unknown Conditions: Should an environmentally hazardous condition or a contaminated area be discovered, quarantine the area affected and do no Work that will disturb the hazardous material or contaminated area.

Notify the Consultant immediately of the situation verbally and in writing. Conform to Environmental Law.
- .3 Hazardous Substances Disposal:
 - .1 Dispose of hazardous substances in accordance with Environmental Laws.
 - .2 Do not under any circumstances, dispose of hazardous substances by burning or burying on site or by discharging into the soil, waterways or drainage system.

1.06 ENVIRONMENTAL PROTECTION

- .1 Erosion and Sediment Control:
 - .1 Minimize amount of bare soil exposed at one time. Stabilize disturbed soil within forty-five (45) days of disturbance to minimize erosion. Remove accumulated sediment resulting from construction activity from adjoining surfaces, drainage systems, and watercourses, and repair damage caused by soil erosion and sedimentation.
 - .2 Provide and maintain appropriate temporary measures such as silt fences, straw bales, ditches, geotextiles, drains, berms, terracing, riprap,

- temporary drainage piping, sedimentation basins, vegetative cover, dikes, and other measures that may be required to prevent erosion and migration of silt, mud, sediment, and other debris.
- .3 Do not disturb existing embankments or embankment protection.
 - .4 Conduct weekly inspection of erosion and sediment control measures to detect evidence of erosion and sedimentation. Promptly take corrective measures when necessary.
 - .5 If soil and debris from site accumulate in ditches or other low areas, remove accumulation and restore area to original condition.
- .2 Site Drainage:
- .1 Maintain grades to ensure proper site drainage.
 - .2 Prevent precipitation from infiltrating or from directly running off stockpiled materials. Cover stockpiled materials with an impermeable liner during periods of work stoppage including at end of each Working Day.
 - .3 Control surface drainage from cuts and fills, from borrow and waste disposal areas, from stockpiles, staging areas, and other work areas as required to prevent erosion and sedimentation.
 - .4 Control surface drainage by ensuring that gutters are kept open and water is not directed across or over pavements or sidewalks, except through pipes or properly constructed troughs. Ensure that runoff from unfinished areas is intercepted and diverted to suitable outlets.
- .3 Plant Protection and Site Clearing:
- .1 Protect all existing trees and landscaping which is to remain at the Place of Work, using methods and materials recommended by the Canadian Nursery Trades Association and as approved by the Consultant.
 - .2 If required, install tree protection zone fencing in accordance with Contract Documents and Drawings.
 - .3 Protect roots of designated trees to drip line during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
 - .4 Minimize stripping of topsoil and vegetation.
 - .5 Restrict tree removal to area indicated or designated in the Contract Documents. No vegetation removal should occur between April 1 and August 30 to protect birds protected under the *Migratory Birds and Convention Act* ("MBCA").
 - .6 If vegetation removal must be undertaken between April 1 and August 30, a nest survey must be conducted by a qualified avian biologist to identify and locate active nests of species covered by the MBCA.
 - .7 Trees free of nests must be removed within 24 hours for nest sweep.
 - .8 Trees with active nests should be monitored periodically during MBCA window and must remain in place until young birds have fledged the nest. Nest sweep should be conducted by qualified Avian Biologist prior to tree being removed.
- .4 Wildlife Habitat Protection
- .1 Allow wildlife incidentally encountered during construction to passively move out of the work area.

- .2 The Contractor shall comply with the following wildlife exclusion fencing resources:
 - .1 <https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing> (OMECP 2020)

- .5 Dewatering:
 - .1 Provide temporary drainage and pumping as necessary to dewater excavations, trenches, foundations, and other parts of the Work.

 Maintain such areas free of water arising from groundwater or surface run-off, as required to keep them stable, dry, and protected from damage due to flooding.
 - .2 Maintain standby equipment necessary to ensure continuous operation of dewatering system.
 - .3 Do not pump water containing suspended materials or other harmful substances into waterways, sewers or surface drainage systems. Treat or dispose of such water in accordance with Environmental Law.

- .6 Pollution Control:
 - .1 Take measures to prevent contamination of soil, water, and atmosphere by Spills, potentially causing environmental damage.
 - .2 Be prepared, by maintaining appropriate materials, equipment, and trained personnel on site, to intercept, clean up, and dispose of Spills that may occur.
 - .3 Promptly report spills and releases that may occur to Owner and Consultant.
 - .4 Contact manufacturer of Environmental Contaminant, if known and applicable, to obtain safety data sheets (SDS) and ascertain hazards involved and precautions and measures required in cleanup or mitigating actions.
 - .5 Take immediate action to contain and mitigate harmful effects of the Spill

- .7 Dust and Particulate Control:
 - .1 Implement and maintain dust and particulate control measures in accordance with Environmental Law.
 - .2 Execute Work by methods that minimize dust from construction operations and spreading of dust on site or to adjacent properties.
 - .3 Provide temporary enclosures to prevent extraneous materials resulting from sandblasting or similar operations from contaminating air beyond immediate work area.
 - .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
 - .5 Use appropriate covers on trucks hauling fine, dusty, or loose materials.

- .8 Noise and Vibration Control:
 - .1 Take measures to control noise and vibration generated by the Work.
 - .2 All construction vehicles and equipment used in the Work shall comply with the noise limits provided by NPC-115 and NPC-118.
 - .3 Comply with the requirements of Authorities Having Jurisdiction and local Noise Control By-Laws to ensure noise generated by the Work is not excessive and not disturbing to the occupants of adjacent buildings / properties.
 - .4 The contractor shall notify the Owner and Consultant of any planned nighttime or weekend construction activities a minimum of thirty (30) days prior to the start of those activities.
 - .5 Vibration levels during construction of the Work shall comply with the limits noted in Table 7-5 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018). I
 - .6 The contractor shall monitor vibration at all structures or buildings where there is a potential to exceed the vibration limits.
 - .7 The contractor shall comply with Enbridge’s Third Party Requirements in the Vicinity of Natural Gas Facilities Standard (2021-09-29).

- .9 Snow Removal
 - .1 Allow no accumulation of ice and snow within the Place of the Work. There shall be no use of salt for de-icing in areas of building work.
 - .2 Remove snow from access routes to the Work to maintain uninterrupted progress of the Work.

- .10 Maintaining existing sewerage flows
 - .1 Maintain existing sanitary sewage flows, where applicable, and provide alternative interim service utilizing duplicate portable sewage pumps, tank trucks and other approved means. Prevent interruption to service throughout the construction period and until the new works are placed in service.
 - .2 Provide and install all temporary sumps, bulkheads and/or other works in existing sewers, maintenance holes and service connections and provide temporary pumps in duplicate and pipelines to dewater and control the sewage.
 - .3 Discharge sewerage flows only to those sanitary sewers remaining in service or to tank trucks for approved disposal. Under no circumstances shall contaminated water be discharged or permitted to enter any drainage or natural watercourse.
 - .4 Temporarily drain or pump any leakage to permit work to be performed in the dry The Contractor’s method shall be subject to review and Acceptance of the Consultant.

- .11 Drainage ditches and storm sewers
 - .1 All ditches, drainage channels and/or storm sewer systems which may be affected by construction shall have their flows maintained at all times

during construction. Drainage shall not be impeded, and blockages or water backups are not permitted.

- .2 Make allowance in prices for any problems that may be encountered because of ditch flows or storm sewer flows. Any damage because of water or flooding shall be the responsibility of the Contractor.

1.07 ARCHAEOLOGY AND CULTURAL HERITAGE

- .1 Archaeology
 - .1 The Contractor shall comply with the following archaeological reference documents:
 - .1 2011 *Standards and Guidelines for Consultant Archaeologists* administered by the Ministry of Citizenship and Multiculturalism (MCM); and
 - .2 Archaeological reports completed for the Project.
 - .2 Before commencing any construction activities, the Contractor shall prepare, implement, and provide for the Consultant's review and Acceptance, an Archaeological Risk Management Plan setting out protocols for the discovery of human remains or undocumented archaeological resources. This Archaeological Risk Management Plan must be produced by a Licensed Professional Archaeologist. At a minimum it will include the following:
 - .1 Actions required resulting from the recommendations of the Archaeological reports;
 - .2 A protocol to be followed if human remains are discovered which includes how the Contractor will ensure that human remains are managed in compliance with Environmental Laws and all requirements of AHJ with respect to such discovery;
 - .3 A protocol to be followed by the Contractor if previously undocumented archaeological resources are discovered which describes how the Contractor will comply with Environmental laws regarding the management of previously undocumented archaeological resources;
 - .4 A process to ensure that the Contractor complies with Environmental laws for the management of archaeological sites.
 - .5 The Contractor shall treat the Archaeological Risk Management Plan as a living document and update it when any archaeological activities occur. Each Archaeological Risk Management Plan Update shall be submitted to the Owner and Consultant for review.
- .3 Upon discovery of human remains or previously undocumented archaeological resources, all construction activities or other work that could have a detrimental impact in the immediate vicinity shall be stopped.
- .4 Any archaeological materials that are discovered during the course of the Works shall be the responsibility of the Contractor for safekeeping until transferred out of the Contractor's control;

- .5 Any future Stage 2, Stage 3 and/or Stage 4 archaeological assessments will adhere to the process noted above.
 - .6 All archaeological assessments will follow the MCM for Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario.
- .2 Cultural Heritage
- .1 The Contractor shall comply with the following cultural heritage reference documents:
 - .1 ONTC Environmental Assessment and Permitting Toolkit, AECOM Canada Limited, 2021;
 - .2 Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes, MCM, 2016;
 - .3 Ontario Heritage Tool Kit, MCM, 2006;
 - .4 Standards and Guidelines for Conservation of Provincial Heritage Properties, MCM, 2010;
 - .5 Standards and Guidelines for Conservation of Provincial Heritage Properties: Heritage Identification Process, MCM, 2014;
 - .6 Information Bulletin No. 2: Strategic Conservation Plans for Provincial Heritage Properties, MCM, 2017;
 - .7 Information Bulletin No. 3: Heritage Impact Assessments for Provincial Heritage Properties, MCM, 2017;
 - .8 Standards and Guidelines for the Conservation of Historic Places in Canada (Parks Canada 2010)
 - .9 Cultural Heritage Reports (including but not limited to: Cultural Heritage Evaluation Reports, Heritage Impact Assessments, and Strategic Conservation Plans).
 - .2 Before commencing any construction activities, the Contractor shall prepare, implement, and provide for Consultant's review and Acceptance a Cultural Heritage Risk Management Plan. The plan shall include, at a minimum, the following requirements for all directly and indirectly impacted properties of known heritage significance or potential heritage significance:
 - .1 The actions required of the Contractor pursuant to the recommendations set out in the Cultural Heritage Reports, Cultural Heritage Evaluation Reports, and Heritage Impact Assessments, and to ensure the protection of identified built heritage resources and cultural heritage landscapes;
 - .2 The Contractors planned approach to carrying out the actions described in the above, including an approach to document, monitor and mitigate vibration to heritage structures during construction;
 - .3 A process for updating and resubmitting the Cultural Heritage Risk Management Plan;
 - .4 A process to ensure that the Contractor complies with Environmental Laws for the management of heritage resources;
 - .5 A process to ensure that the Contractor provides to the Owner any cultural heritage evaluation reports, cultural heritage reports, cultural heritage impact assessments, conservation plans, or any

other documentation as may be required of the Contractor pursuant to Environmental Law or the Cultural Heritage Reports, in addition to those provided with the Contract Documents.

1.08 EXCESS SOIL MANAGEMENT

.1 Soil and Excavated Materials Management Plan

- .1 The Contractor shall prepare, submit for Acceptance to the Owner and Consultant and implement a soil and groundwater management strategy (a "Soil and Excavated Materials Management Plan") that describes how the Contractor will address the handling, management, treatment, reuse, storage, monitoring and disposal of soil and excavated materials (i.e., soil, fill, rock and solid Hazardous Waste and non-Hazardous Waste, including Environmental Contaminants) that is generated or encountered during the Works. The Soil and Excavated Materials Management Plan shall include, at a minimum, descriptions of:
 - .1 the general principles that the Contractor will apply for managing soil and excavated materials;
 - .2 the over-arching soil and excavated materials management strategy for the Project in terms of sustainable principles and compliance with regulatory requirements (including, but not limited to, On-site and Excess Soil Management Regulation – O. Reg. 406/19) and best practices;
 - .3 the estimated quantities of soil and excavated materials to be managed during the Works and proposed methods for minimizing these quantities;
 - .4 the strategy to reuse soil and excavated material;
 - .5 the strategy for stockpiling and monitoring the soil and excavated material at the Site, and to mitigate any exceedance of any Authorized Volume;
 - .6 a preliminary schedule indicating the affected areas to be excavated over the course of the Project, and the associated quantities for each stage of construction;
 - .7 protocols for characterizing soil and excavated materials quality and determining management, including handling, reuse, storage, transportation, documentation, treatment and disposal requirements;
 - .8 how soil and excavated materials will be temporarily staged or stored at the site or other worksites for reuse or stockpiled and monitored or transferred to disposal with regard for potential environmental effects and impacts to human health and safety;
 - .9 how soil and excavated materials quantities will be tracked and reported to the Owner during excavation, transport, treatment, disposal or stockpiling;
 - .10 how clean fill will be sourced and brought to the site;
 - .11 mitigation measures to address any impacts associated with the excavation, management, reuse, stockpiling, transport, treatment or disposal of soil and excavated materials;
 - .12 a monitoring plan in which monitoring of the contaminated and hazardous stored soil and excavated material are recorded and reported; and

- .13 how the discovery of Environmental Contaminants in areas not previously identified will be managed including a general plan of action for the remediation, storage or removal of Environmental Contaminants as detailed in the Contamination Management Plan defined below
- .2 The Contractor shall adhere to groundwater and dewatering management.
- .3 The Contractor shall submit the Soil and Excavated Materials Management Plan for Acceptance by the Owner and Consultant.

1.09 CONTAMINATION MANAGEMENT PLAN

- .1 The Contractor shall prepare the Contamination Management Plan and submit it to the Owner and the Consultant for Review and Acceptance. The Contamination Management Plan shall include:
 - .1 the date and time that the Environmental Contaminants was discovered;
 - .2 a description of the Environmental Contaminants including the location (municipal address and/or UTM coordinates) and a figure depicting the location of the Environmental Contaminants;
 - .3 a detailed description of the circumstances under which the Environmental Contaminants was discovered, including the preliminary field assessment and observations;
 - .4 a detailed description of the handling and management of the Environmental Contaminants prior to submittal of the Contamination Management Plan;
 - .5 a detailed description of the preliminary field investigation including date, time and depth of samples collected, sampling methods, number of samples collected, chemical parameters, media tested and an explanation of the delineation method for Environmental Contaminants;
 - .6 a figure depicting sampling locations, sample exceedances and estimated vertical and horizontal extent of the Environmental Contaminants in relation to the site;
 - .7 copies of borehole and test pit logs for sample locations related to the Environmental Contaminants, including soil description and classification;
 - .8 copies of laboratory certificates of analysis for the samples collected, including grain size analysis (if applicable);
 - .9 sampling and analysis requirements in accordance with O. Reg. 406/19;
 - .10 a description of management options for the Environmental Contaminants and the Contractor's preferred management option, including a description of whether containment measures are required to avoid re-contamination or migration of the Environmental Contaminants;
 - .11 an implementation plan, including a detailed description of how Environmental Contaminants will be managed and estimated quantities of soil and groundwater to be disposed off-site and reused within the Project, if applicable;

- .12 any impact to the Project Schedule caused by the discovery of Environmental Contaminants;
 - .13 additional costs, if any, associated with incremental measures required to manage the Environmental Contaminants;
 - .14 name and address of the receiver site for the soil containing Environmental Contaminants;
 - .15 additional information as requested by the Owner and/or Consultant; and
 - .16 rationale for assigning responsibility for the Environmental Contaminants, including an assessment and comparison of the discovered Environmental Contaminants characteristics against available baseline environmental information such as the Project's Soil and Groundwater Characterization Report.
- .2 The Contractor's Qualified Person shall supervise the extraction, transport, removal, disposal or discharge of contaminated media identified in the Contamination Management Plan.
 - .3 In accordance with Environmental Law, the Contractor shall be responsible for the characterization, testing, and analysis of soil and groundwater that requires off-Site disposal, off-Site reuse or on-Site reuse, to the satisfaction of the receiver or disposal site and to the satisfaction of Owner and Consultant.
 - .4 The Contractor shall be responsible for registration with the Resource Productivity and Recovery Authority (RPRA) and recordkeeping for disposal of regulated Waste, as applicable.
 - .5 The Contractor shall update the Contamination Management Plan with additional information following the implementation of the Contamination Management Plan (the "Updated Contamination Management Plan") and the Contractor shall submit such updated plan to the Owner and Consultant in accordance with Project submission timeframes. The Updated Contamination Management Plan shall include:
 - .1 a summary of the information presented in the Contamination Management Plan;
 - .2 a detailed description of the handling and management of the Environmental Contaminants following submittal of the Contamination Management Plan;
 - .3 a detailed description of the handling and management of the Environmental Contaminants following submittal of the Contamination Management Plan;
 - .4 a detailed description of field investigations conducted during implementation of the Contamination Management Plan including date, time and depth of samples collected, sampling methods, number of samples collected, chemical parameters, media tested and explanation of the delineation method for Environmental Contaminants;
 - .5 a figure depicting sampling locations, sample exceedances and vertical and horizontal extent of the Environmental Contaminants remediated on site;
 - .6 copies of borehole and test pit logs for sample locations related to the Environmental Contaminants, including soil description and classification;
 - .7 quantity of soil and groundwater disposed outside the Lands

- and reused within the lands;
 - .8 name and address of the receiver site for the Environmental Contaminants;
 - .9 electronic copies of waste manifests or bills of lading;
 - .10 a description of containment measures for the Environmental Contaminants employed to avoid re-contamination or migration of Environmental Contaminants;
 - .11 a description of whether the Environmental Contaminants entered lands outside of the Project site;
 - .12 a description of post-implementation monitoring or sampling needed; and
 - .13 signature of the Contractor's Qualified Person who supervised the implementation of remediation activities and preparation of the Updated Contamination Management Plan.
- .6 The Contractor is encouraged to seek opportunities for beneficial reuse (rather than remove or replace) for as much soil from the Project as possible in a manner that is consistent with Ontario Regulation 406/19, provided that the Contractor complies with its obligations under this Contract.
 - .7 The Contractor shall evaluate reuse options to consider site-specific excess soil quality criteria in cases where soil is geotechnically suitable for reuse as engineered fill, including where such soil may be subject to some reconditioning such as drying or wetting, but soil quality does not meet the applicable generic excess soil quality standard.
 - .8 The Contractor shall reuse (rather than remove or replace), as feasible, as much soil on site as possible in a manner that is consistent with Ontario Regulation 153/04, Ontario Regulation 406/19 and the MECP's Rules for Soil Management and Excess Soil Quality Standards, as amended, provided that the Contractor complies with its obligations under this Contract.
 - .9 The Contractor shall evaluate reuse options in cases where soil is geotechnically stable for reuse but soil quality does not meet the applicable generic excess soil quality standard.

1.10 MANAGEMENT, REMOVAL AND REMEDIATION OF SOIL WITH ENVIRONMENTAL CONTAMINANTS

- .1 The Contractor shall be responsible for excavating, handling, managing, stockpiling, removing, and transporting of soil and excavated material as required to complete the Project, including soil and excavated material containing Environmental Contaminants. The Contractor shall reuse or dispose of soil and excavated material that does not contain Environmental Contaminants at its own cost.
- .2 The Contractor shall be permitted to reuse any soil and excavated material containing Environmental Contaminants as part of the Works provided the Contractor's reuse of such soil complies with Environmental Laws and MECP Guidelines, Standards and Rules. The Contractor shall not be entitled to any additional compensation from the Owner where such soil or excavated material is reused.
- .3 Upon discovery of soil containing Environmental Contaminants that will require excavation to complete the Project and that the Contractor will not reuse, the Contractor shall notify the Owner and Consultant. Such notification shall clearly indicate the anticipated volume of soil containing Environmental Contaminants

that will be excavated and not reused. The Contractor shall not be permitted to provide such notification until the Contamination Management Plan has been submitted for Acceptance to the Owner and Consultant. The Owner shall, no later than fifteen (15) Working Days following Notice in Writing from the Contractor that contains all information provided in the notification, described above, and the Contamination Management Plan, direct the Contractor either to:

- .1 dispose of such soil containing Environmental Contaminants; or
 - .2 stockpile such soil containing Environmental Contaminants on the Place of the Work (or Station Location).
- .4 The Owner may specify a maximum volume that is to be disposed of or stockpiled (the "Authorized Volume"). Where the Owner has specified an Authorized Volume, the Contractor shall be required to submit a new notification for any remaining soil containing Environmental Contaminants following completion of the disposal or stockpiling of the Authorized Volume in order to receive further direction from the Owner, including a revised Authorized Volume.
- .5 If the Contractor is directed to dispose of soil containing Environmental Contaminants, then:
- .1 the Contractor shall proceed to dispose of the soil at a licensed facility in Ontario and inform the Owner of the selected facility;
 - .2 the Contractor shall be compensated with an agreed upon pricing for each ton of excavated soil containing Environmental Contaminants that is disposed, up to any Authorized Volume and Invoicing and such compensation shall be deemed to include all handling, shipping and disposal fees and costs and all administrative and profit costs of the Contractor.
- .6 If the Contractor is directed by the Owner to stockpile such soil containing Environmental Contaminants on the Site, then the Contractor shall:
- .1 utilize an agreed upon laydown area;
 - .2 provide geomembrane ground protection to prevent leaching of Environmental Contaminants;
 - .3 provide a full geomembrane cover over the stockpile;
 - .4 provide a permanent monitoring system;
 - .5 comply with the portions of the On-site and Excess Soil Management Regulation (O. Reg. 406/19) regarding stockpiling, the MECP Rules for Soil Management and Excess Soil Quality Standards and the MECP Management of Excess Soil - A Guide for Best Management Practices;
 - .6 develop and submit to the Owner a monitoring program for the stockpiled soils for review and Acceptance by the Consultant.

1.11 WEEKLY SOIL AND EXCAVATED MATERIALS REPORT

- .1 The Contractor shall provide a template of the Weekly Soil and Excavated Materials Report to the Consultant.
- .2 The Contractor shall submit a weekly report for soil and excavated material to the Consultant (each a "Weekly Soil and Excavated Materials Report") that includes at a minimum:

- .1 analytical results of chemical samples collected for soil, groundwater or other material in the area of the Works before and after construction;
- .2 record of quantity of excavated material, reused at the site in metric tonnes;
- .3 record of excavated material stockpiled at the site in metric tonnes;
- .4 all back-up documents of soils, groundwater or other materials removed from site, including tickets indicating soil or other material quantity, landfill or final treatment or disposal location;
- .5 Site reports complete with photos and back-up documents on all soil, groundwater or other materials remedial work activities;
- .6 documentation related to any unforeseen site issues during soil, groundwater or other materials remedial work activities;
- .7 a cost table indicating all associated costs in the removal, management, transportation, treatment and disposal of the soil, groundwater or other materials in the area of the Works;
- .8 a description of how the discovery of Environmental Contaminants in areas not previously identified will be managed including the preparation of a plan for the re-use, stockpile, remediation or removal of Environmental Contaminants; and
- .9 reporting as to how all management activities and best practices have been implemented.

1.12 HAZARDOUS SUBSTANCES BROUGHT ONTO THE SITE

- .1 Notwithstanding any Environmental Laws or any other provision, all products and materials, goods or other items which in their natural, original state, or through environmental transformation or degradation contain Hazardous Substances, that are brought onto the site by the Contractor or any person for whom Contractor is at law responsible shall be and remain the sole and exclusive property and responsibility of Contractor and shall not become the property or responsibility of the Owner, notwithstanding their incorporation into or affixation to the site as part of the Work, and notwithstanding any termination or expiration of the Project. Any resulting Environmental Contaminants at the site in respect of any Hazardous Substances so brought onto the site and the remediation and/or removal thereof and the cost of such remediation and/or removal shall be the sole responsibility of the Contractor.

1.13 SPILL PREVENTION PLAN

- .1 The Contractor shall prepare, submit, and implement a Spill Prevention Plan (a "Spill Prevention Plan"). The Spill Prevention Plan shall describe the measures the Contractor will take to prevent Spills of liquid chemicals, fuels and lubricants, and manage or otherwise mitigate the effects of any such Spills to construction personnel and the environment during the term of the Project. The Spill Prevention Plan shall consider site-specific characteristics, and include, at a minimum, the following:
 - .1 the types and nature of liquid chemicals, fuels and lubricants to

- be used during the performance of the initial Works;
- .2 the facilities and procedures to be used for storing and handling such materials, including Spill response, containment and clean-up materials;
- .3 monitoring and inspection procedures, including monthly inspections of Spill response and safety equipment, to ensure that management requirements are maintained and that inspections are documented;
- .4 employee training on the storage and use of liquid chemicals, fuels and lubricants and the prevention of Spills;
- .5 subsurface infrastructure (for example, weeping tile, infiltration galleries, etc.) that may influence the destination of any Spill material;
- .6 the identification of municipal and natural discharge locations (for example, municipal catch basins) and drainage pathways on the Site, and a description of the direction of flow in the event of a Spill;
- .7 Spill response procedures for each type of material that may be spilled, and the various environmental media that may be affected (for example, atmosphere, water bodies, ground surface);
- .8 procedures for clean-up and restoration of surfaces and environmental media that may be affected by the Spill; and
- .9 procedures for notification and reporting of Spill events to Contractor and to Authorities Having Jurisdiction, as applicable.

- .2 The Contractor shall submit the Spill Prevention Plan to the for review and Acceptance.
- .3 The Contractor shall ensure that a hard copy of the latest revision of the Spill Prevention Plan is available in all site trailers and all site offices.
- .4 After each and any occurrence of a Spill, irrespective of the quantity or characteristics of the material spilled, the Contractor shall prepare and submit a spill prevention occurrence report (a "Spill Prevention Occurrence Report") to the Consultant. The Spill Prevention Occurrence Report shall summarize how all Spill Prevention Plan activities were implemented during the remediation and management of the occurrence of the Spill and the associated outcomes.

1.14 DESIGNATED SUBSTANCES AND HAZARDOUS SUBSTANCE MANAGEMENT PLAN

- .1 The Contractor shall review the "Designated Substances Survey Report – Matheson Station".
- .2 The Contractor shall prepare and implement a Designated Substances and Hazardous Substance Management Plan (a "Designated Substances and Hazardous Substance Management Plan"). The Contractor shall submit the Designated Substances and Hazardous Substance Management Plan for review and Acceptance. The Designated Substances and Hazardous Substance Management Plan shall describe:
 - .1 how the Contractor will manage all Designated Substances and

Hazardous Substance, including, but not limited to, abatement, handling, transportation, testing, removal, disposal and/or ultimate disposition of all Designated Substances and Hazardous Substance determined to be present, or generated as part of the Works;

- .2 the general principles that the Contractor will apply for managing the necessary removal of Designated Substances and Hazardous Substances;
- .3 the Contractor’s over-arching Designated Substances and Hazardous Substance management strategy in terms of sustainable principles and compliance with Environmental Laws and best practice;
- .4 locations of Designated Substances and Hazardous Substances to be abated, managed or removed by Contractor during the Work. The Contractor shall carry out necessary testing for Designated Substances and Hazardous Substances under section 30 of the Occupational Health and Safety Act (Ontario), and under section 8 Regulation 278/05, and protect workers from working with or in proximity to or from being otherwise exposed to Designated Substances at the Site or the Works. The Designated Substances and Hazardous Substance Management Plan shall describe all applicable processes for same;
- .5 the Contractor’s protocols for safe handling, abatement, management, and removals, including disposal requirements;
- .6 how the Contractor will ensure that no adverse impacts will result to adjacent properties during the abatement, handling, management or removal of Designated Substances and Hazardous Substances;
- .7 how the Contractor will conduct its activities in compliance with the Occupational Health and Safety Act (Ontario) and all applicable law and industry practices;
- .8 the further necessary measures the Contractor will take to ensure the safety of all personnel accessing the Site and the Works, to the standards of applicable Occupational Health and Safety Law;
 - .1 the Contractor’s contingency plans to mitigate adverse impacts; and
 - .2 the Contractor’s reporting procedures to document and report to the Owner how all testing, management activities, best practices and mitigation measures have been implemented.
- .3 Contractor acknowledges that section 30(5) of the Occupational Health and Safety Act (Ontario) shall not apply to the circumstances of the site and the Works of the Owner, given the obligations of the Contractor set out in Section 1.13.2.4.
- .4 The Contractor shall prepare and submit a Designated Substances and Hazardous Substance implementation report (a “Designated Substances and Hazardous Substance Implementation Report”) to the Consultant for Acceptance. The Designated Substances and Hazardous Substance Implementation Report shall summarize how all Designated Substances and Hazardous Substance

Management Plan activities were implemented during the Works and the associated outcomes.

1.15 OTHER ENVIRONMENTAL MATTERS

.1 Organic Materials

.1 Organic materials from excavation operations may contain peat, topsoil and subsoil materials. Contractor shall remove these materials from the Site in accordance with Environmental Laws and best practice. The Contractor shall not allow burial or reuse of any excavated organic materials on the site.

.2 Protection/Decommissioning of Existing Monitoring Wells

.1 The Contractor shall be responsible for temporary protection and final decommissioning of all existing or newly installed monitoring wells in accordance with Ontario Regulation 903 under the Ontario Water Resources Act (Ontario), as directed by the Owner, including with respect to:

.1 any and all monitoring wells installed as part of geotechnical, environmental, or hydrogeological investigations in connection with the Project; and

.2 all wells installed as part of the studies undertaken by the Owner and that were provided as part of the project background information.

.2 The Contractor shall, prior to Ready-for-Takeover (unless the Owner provides an alternative timing), decommission any wells installed by the Contractor as part of its own investigation and monitoring work as necessary to complete the Works.

2 Products

2.01 NOT USED

3 Execution

3.01 NOT USED

3.02 END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 This Section references laws, bylaws, ordinances, rules, regulations, codes, orders of Authority Having Jurisdiction (AHJ), and other legally enforceable requirements applicable to the Work and that are or become enforced during performance of the Work.

1.02 REFERENCE STANDARDS AND REFERENCE DOCUMENTS

- .1 If specified referenced standards do not indicate an edition or version, the latest edition or revision issued by the publisher at the time of RFP closing shall apply, except as follows:
 - .1 If a particular edition or revision date of a specified standard is referenced in an applicable code or other regulatory requirement, the edition or version in the regulatory reference shall apply.
 - .2 The specified reference standards establish minimum requirements. If Contract Documents indicate requirements that conflict with a reference standard, the more stringent requirements shall apply.
 - .3 If multiple reference standards are specified and the standards establish different requirements, the most stringent requirement shall apply.
 - .4 In case of discrepancy or uncertainties, refer to the Consultant for interpretation or clarification.
 - .5 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.03 CODES

- .1 Building Code: Perform Work in accordance with the Ontario Building Code including amendments up to the time of RFP closing and other codes of provincial or local application.
- .2 Fire Code: Perform Work in accordance with the Ontario Fire Code 2020 including amendments up to the time of RFP closing and other codes of provincial or local application.
- .3 Energy Code: Perform Work in accordance with the National Energy Code of Canada for Buildings (NECB) 2020 and Part 12 of OBC Resource Conservation and Environmental Integrity and Supplementary Standard SB-10 whichever is more stringent, including amendments up to the time of RFP closing and other codes of provincial or local application.
- .4 Plumbing Code: Perform Work in accordance with Ontario Plumbing Code Part 7 of OBC. including amendments up to the time of RFP closing and other codes of provincial or local application.
- .5 If there is a conflict or discrepancy between codes, the most stringent requirements shall apply.

- .6 Specific design and performance requirements listed in Specifications and indicated on Drawings may exceed minimum requirements established by referenced Codes; these requirements will govern over the minimum requirements listed in the referenced Codes.

1.04 FEES

- .1 Except as otherwise specified, Contractor shall apply for, obtain, and pay fees associated with permits, licenses, certificates, and approvals required by regulatory requirements and Contract Documents, based on General Conditions of Contract and the following:
- .1 Regulatory requirements and fees in force at the time of RFP closing, and
 - .2 A change in regulatory requirements or fees scheduled to become effective after the time of RFP closing and of which public notice has been given before the time of RFP closing.

2 PRODUCTS

2.01 EASEMENTS AND NOTICES

- .1 Owner will obtain permanent easements and rights of servitude that may be required for performance of the Work.
- .2 Contractor shall give notices required by regulatory requirements.

2.02 PERMIT REQUIREMENTS

- .1 Construction Related Permits:
- .1 If required, MTO Building and Land Use Permits will be obtained by the Owner.
 - .2 Obtain and pay for all other required Certificates, Licenses and other permits required by regulatory municipal, provincial or federal authorities to complete the Work.
 - .3 Contractor will require that specific Subcontractor[s] obtain and pay for permits required by authorities having jurisdiction (AHJ), where their work is affected by work requiring permits.
 - .4 Contractor shall display permits in a conspicuous location at the Place of the Work.
- .2 Occupancy Permits:
- .1 Contractor shall apply for obtain and pay for any required permits and or certificates where required by AHJ.
 - .2 Contractor shall correct deficiencies in accordance with the Consultant's instruction. If a deficiency is not corrected, the Owner reserves the right to make correction and charge Contractor for costs incurred.
 - .3 Contractor shall turn all permits and certificates over to Owner.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 ASTM International (ASTM):
 - .1 ASTM E329-[20]Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection
- .3 International Organization for Standardization (ISO):
 - .1 ISO 9001: [2015], Quality Management Systems – Requirements

1.02 SUMMARY

- .1 This section describes administrative and procedural requirements for proactive Contractor activities to assure the quality of construction before and during execution of the Work.

1.03 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 01 45 00 – Quality Control

1.04 ADMINISTRATIVE REQUIREMENTS

- .1 Contractor is responsible for self-performed testing and inspections and submittal of test reports to the Consultant.
- .2 The Owner may employ and pay for quality audit services performed through third-party observation and testing to validate the Contractor's performance of the Work and perform whole Work testing at completion of Project.
- .3 Contractor to provide a Quality management system that establishes a standardized approach to managing quality of materials and workmanship during the execution of Work in accordance with ISO 9001. The quality management system shall consist of plans, procedures, and organization necessary to produce complete the Work in compliance with the Contract Document requirements.

1.05 ACTION AND INFORMATION SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit a Quality Management Plan to the Consultant for review and Acceptance prior to Preconstruction meeting.

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- .1 The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Owner will consider an interim plan for the first twenty (20) Working Days of operation. The Contractor may begin mobilization during the interim period.
 - .2 The Work will be permitted to begin only after Acceptance of the Quality Management Plan or Acceptance of an interim plan applicable to the portion of the Work to be started.
 - .3 The Quality Management Plan shall include, as a minimum, the following to cover all Work both at the Place of the Work, and in off-site locations (such as manufacturing facilities), including Work by Subcontractors, fabricators, suppliers, and purchasing agents:
 - .1 A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the quality control staff shall implement the three-phase control system for all aspects of the work specified. The staff shall include the person responsible for quality who shall report to the Contractor's project manager.
 - .2 The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a quality control function.
 - .3 A copy of the letter to the person responsible for quality signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of person responsible for quality, including authority to stop work that is not in compliance with the Contract Documents. The person responsible for quality shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be supplied to the Consultant.
 - .4 Procedures for scheduling, reviewing, certifying, and managing Submittals, including those of Subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with the Contract Documents.
 - .5 Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, portion of the Work to be tested, test frequency, and person responsible for each test.
 - .6 Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests, including documentation.
 - .7 Procedures for tracking defects and deficiencies from identification through Acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
 - .8 Reporting procedures, including proposed reporting formats.
 - .9 A list of the definable features of Work. A definable portion of the Work is a task which is separate and distinct from other tasks and has separate control requirements. This list will be agreed upon with the Consultant during a coordination meeting.

- .10 Acceptance of the Contractor's Quality Management Plan is required prior to the start of the Work. Acceptance is conditional and will be predicated on satisfactory performance during the Work.
- .11 The Owner reserves the right to require the Contractor to make changes in its Quality Management Plan and operations, as necessary, to obtain the quality specified.
- .12 Refer to the Contract Documents for additional requirements.
- .4 Submit a detailed testing and inspections schedule for Acceptance to the Consultant in accordance with the Contractor's Quality Management Plan.
- .5 Submit certificates for Products, process and system for Acceptance by the Consultant.
- .6 Submit formal testing and inspections reports per ASTM E329 and as indicated in Specifications to the Consultant in accordance with the Contract Documents.
- .7 Submit one digital copy of each Quality Assurance inspection and test report to the Consultant, except where Specifications indicate otherwise.
- .8 Submit mill test certificates, as required, in technical Specifications and as indicated on Drawings.

1.06 Quality Control Organization:

- .1 The requirements for the quality control organization are a person responsible for quality and sufficient number of additional qualified personnel to ensure compliance to Contract Documents.
- .2 Provide a quality control organization which shall be available at all times during progress of the Work and with complete authority to take any action necessary to ensure compliance with the Contract Documents.

1.07 QUALIFICATIONS

- .1 Manufacturers' Qualifications:
 - .1 specializes in manufacturing the Products specified in the Specifications.
 - .2 minimum three (03) years documented experience with a record of successful performance.
- .2 Suppliers' Qualifications:
 - .1 authorized to distribute manufacturer's Products
 - .2 has capacity to supply required Products without delaying the Project
- .3 Fabricators' Qualifications:
 - .1 experienced in producing Products required for this Project
 - .2 successful record of in-service performance
 - .3 sufficient production capacity to fabricate required Products without delaying the

Project

- .4 Installer Qualifications:
 - .1 firm or individual experienced in design and installation, application, and erection of materials to the extent required for this Project
 - .2 successful record of in-service performance
- .5 Testing and Inspecting Agency Qualifications:
 - .1 accredited organizations by the Standards Council of Canada for testing and inspection
 - .2 capable of reliably performing testing of building products and inspections of construction activities in accordance with ISO 9001 and ASTM E329.
- .6 Licensed Professionals Qualifications:
 - .1 individual registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the province, state or jurisdiction in which the Project is to be constructed.

1.08 CERTIFICATIONS

- .1 Ensure that certification of Products, processes, and systems includes physical and examination testing as specified in ASTM E329 SO 9001 to confirm compliance with Specifications requirements.

1.09 COORDINATION

- .1 Coordinate and schedule tests and inspections with accredited testing, inspection agencies as indicated in Contract Documents and in accordance with ASTM E329 requirements.
- .2 Coordinate Contractor's Quality Management system with the Consultant for reporting, scheduling access and incidental labor required by Quality Auditor's reports if required.
- .3 When attendance is required, notify the Consultant in advance before proceeding with tests and inspections, and additional tests and inspections as may be reasonably requested by the Consultant.
- .4 Coordinate testing and inspections schedule with Subcontractor, testing agencies, and other affected parties.

1.10 SITE SAMPLES

- .1 Testing agency is responsible for obtaining representative samples of those materials required to be tested and evaluated in accordance with the Contractual Documents.
- .2 Ensure testing agency performs sampling in accordance with ASTM E329.
 - .1 When sampling collection is required by testing agency, ensure proper protection, handling and storing of samples.

- .3 Testing agency to document procedures and appropriate techniques to select samples.
- .4 Record details of environmental conditions present during the sampling, such as rain or freezing weather that may affect testing of sample or interpretation of test results.

1.11 Mock-ups

- .1 Mock-ups can be used as a reference for assessing quality of workmanship and site-applied finishes as requested in the Project's Contract Documents.
- .2 Prepare mock-ups for Work specifically requested in Specifications. Except when required in other sections, obtain the Consultant's Acceptance to construct and install mock-ups. When not required, Contractor shall indicate the use of mock-ups in their Quality Management Plan.
- .3 Assemble mock-ups at the Place of the Work in locations acceptable to the Consultant, or where location is indicated in the technical Specifications.
- .4 Schedule mock-ups ready for the Consultant review and Acceptance in orderly sequence, to avoid delays in Work.
 - .1 Failure to prepare mock-ups in ample time is not considered sufficient reason to request an extension of Contract Time. Claims for extension of Contract Time by reason of such default will not be considered.
- .5 Consult with the Consultant in scheduling dates for construction and review of mock-ups. Provide sufficient notice as directed by the Consultant.
- .6 Construct mock-ups using materials, finishes, colours, and methods proposed for the completed Work. Mock-ups to demonstrate proposed workmanship and range of aesthetic appearance.
- .7 Where a mock-up represents or affects multiple Specification sections, coordinate activities to ensure mock-ups are complete.
- .8 Modify or replace mock-ups when unacceptable to the Consultant.
- .9 Maintain acceptable mock-ups in an undisturbed condition as a standard for judging the completed Work.
- .10 Demolish and remove mock-ups at conclusion of the Work or when Acceptable to the Consultant.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

1. Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 SUMMARY

- .1 This Section describes administrative and procedural requirements for reactive activities to verify that completed Work conforms to Contract Documents requirements.
- .2 Having inspection and testing agencies employed by Contractor or the Owner does not relieve the Contractor of their responsibility to perform Work in accordance with Contract Documents.

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Allow and coordinate access to Work on site, manufacturing off site, and fabrication off site with inspection and testing agencies, the Consultant and the Owner.
- .2 Retain and pay for inspection and testing that are designated for Contractor's own Quality Management Plan, and when testing and inspection are required by Authorities Having Jurisdiction (AHJ).
- .3 Provide advanced notice, minimum five (05) Working Days to the Consultant and to each inspection/testing agency for inspection and testing required by Contract Documents or by (AHJ).
- .4 Where Owner cooperation, input or participation is required to fully perform inspection and test activities, particularly in relation to the correct operation of Products Supplied by Other and installed by the Contractor, provide a minimum ten (10) Working Days' notice to the Consultant.
- .5 In advance of each test, notify appropriate agency and the Consultant in the order that attendance arrangements can be made.
- .6 Employment of inspection and testing agencies does not relax or remove responsibility to perform Work in accordance with Contract Documents.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit schedule of testing and inspection activities to the Consultant, applicable Subcontractors, testing agencies, Owner, and other affected parties. Include the following:
 - .1 List each testing and inspection agency

- .2 Identify types of tests and inspections for each agency, and cross reference to applicable specification section number-title in Contract Documents
 - .3 Description of test and inspection
 - .4 Identify applicable reference standard
 - .5 Identify test and inspection method
 - .6 Indicate number of each test and inspection required
- .3 Submit one digital copy of each quality assurance inspection and test report to the Consultant, except where a technical Specification section indicates otherwise.
 - .4 Submit reports for inspection and testing required by Contract Documents or by AHJ and performed by Contractor-retained inspection and testing agencies within ten (10) Working Days after inspection or test is completed, except where a technical Specification section indicates a different time period.
 - .5 Submit one digital copy of each quality control inspection and test report to the Consultant, except where a technical Specification section indicates otherwise. Maintain copies available at Place of the Work in accordance with Section 01 78 00 - Closeout Submittals.
 - .6 Deliver copies of quality control reports to Subcontractor of Work being inspected or tested.

1.05 SITE QUALITY CONTROL PROCEDURES

- .1 Provide labor, Construction Equipment, and temporary facilities to obtain and handle test samples and materials on site. Arrange for sufficient space to store and cure test samples.
- .2 Deliver samples and materials required for testing, as requested in technical Specification sections. Submit with reasonable promptness and in an orderly sequence to avoid delays in Work.
- .3 Before Project start, photograph Project site and existing conditions in accordance with Section 01 33 00 – Submittal Procedures.

1.06 TESTING AND INSPECTION SERVICES

- .1 The Owner may retain and pay for independent inspection and testing agencies to inspect, test, or perform other quality control reviews of parts of the Work, in addition to those carried by the Contractor.
- .2 Consultant may order any part of the Work to be reviewed or inspected if the Work is suspected to be not in accordance with Contract Documents. If, upon review such Work is found not in accordance with Contract Documents, the Contractor shall correct such Work and pay cost of additional review and correction.
- .3 Provide equipment required for executing inspection and testing by appointed agencies.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and testing to ascertain full degree of defect. Correct defect and irregularities as advised

by Consultant at no cost to Owner. Pay costs for retesting and re-inspection.

- .5 Quality control testing and inspection reports to include the following:
 - .1 Project name and number
 - .2 Testing/Inspection agency's name, address, telephone number, and website
 - .3 Date of issuing report
 - .4 Dates and locations of tests, inspections, or samples
 - .5 Description of the Work and test and inspection method
 - .6 Numbers and titles of associated Specification sections
 - .7 Test and inspection data and interpretation of test results (e.g., pass or fail)
 - .8 Ambient conditions at time of test, inspection, or sampling
 - .9 Recommendations on re-testing and re-inspecting, if applicable.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

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

1.03 TEMPORARY ELECTRICITY

- .1 When Electrical power is not available at site, make all necessary arrangements and pay for all costs for a temporary electrical service of sufficient capacity to supply temporary lighting, operation of power tools, cranes and equipment for all construction, implementation, and inspection and testing purposes. Supply and install necessary temporary cables and other electrical equipment and make all temporary connections as required. If generators are used, they should be of the kind that minimize noise impact to surrounding areas and residents.
- .2 Arrange for connection with appropriate utility company. Pay costs for installation, maintenance, and removal.
- .3 When Electrical power supply is available at site and supply is metered to ONTC, subject to agreement of the Consultant, it may be provided for construction use at no cost. Contractor shall ensure their use shall not cause the overall use to exceed supply voltage and capacity. Connect to existing power supply in accordance with Canadian Electrical Code.
- .4 Electrical power systems installed under this Contract may be used for construction requirements only with prior approval from the Consultant if warranties are not affected. Repair damage to electrical system caused by the Contractor's use under this Contract.
- .5 Temporary power distribution wiring shall comply with Ontario Electrical Safety Code. Obtain inspection certificates for temporary electrical work.

1.04 TEMPORARY FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work in accordance with Section 01 35 35 – Fire Safety Protection.

1.05 TEMPORARY HEATING COOLING AND VENTILATING

- .1 Provide temporary heating as required during construction period, including attendance, maintenance and fuel.
- .2 Construction heaters used inside building must be vented to outside or be of the flameless (vent free) type. Solid fuel salamanders are not permitted.

- .3 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of Work.
 - .2 Protect Work and Products against dampness and cold.
 - .3 Prevent moisture and condensation on surfaces.
 - .4 Provide ambient temperatures and humidity levels for storage, installation, and curing of materials.
 - .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .4 Maintain minimum temperatures recommended by applicable codes and regulations in areas where construction is in progress.
- .5 Ventilating:
 - .1 Prevent accumulations of dust, fumes, mists, vapours, or gases in occupied areas during construction.
 - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
 - .3 Dispose of exhaust materials in a manner that will not result in harmful exposure to persons.
 - .4 Ventilate storage spaces containing hazardous or volatile materials.
 - .5 Ventilate temporary sanitary facilities.
 - .6 Continue operating ventilation and exhaust system after cessation of work process until complete removal of harmful contaminants is ensured.
- .6 Permanent heating, ventilating, and air conditioning system of building must not be used.

1.06 TEMPORARY LIGHTING

- .1 Provide and maintain temporary lighting throughout Project. Ensure level of illumination on all work area is suitable and will meet or exceed the requirement of Health and Safety regulations and as per applicable codes and standards.
- .2 Electrical lighting systems installed under this Contract may be used for construction requirements only with prior approval of the Consultant if warranties are not affected.
 - .1 Repair damage to lighting systems caused by use under this Contract.
 - .2 Replace lamps that have been used for more than [3] months.
- .3 Temporary lighting installed under this Contract shall not cause light nuisance and or adversely impact ONTC Operations and surrounding areas and properties. Make adjustments to the satisfaction of Owner.

1.07 TEMPORARY SANITARY FACILITIES

- .1 Provide sanitary facilities in accordance with Occupational Health and Safety requirements in the

Place of the Work. Use of Owner's existing sanitary facilities or new sanitary facilities is not allowed.

1.08 TEMPORARY TELECOMMUNICATIONS

- .1 If required, provide and pay for temporary telephone, data hook up equipment necessary for own use and use of the Consultant.

1.09 TEMPORARY WATER

- .1 When available, Owner will provide water for construction use. Otherwise, the Contractor will be responsible for the water supply and all associated costs.
- .2 Arrange for connection with appropriate utility company and pay costs for installation, maintenance, and removal as required.

2.01 INSTALLATION AND REMOVAL

- .1 Provide temporary utilities to execute Work expeditiously.
- .2 Remove all such temporary utilities from site after use.
- .3 Be responsible for the careful and reasonable use of Owner-supplied utilities. Make good and remediate any damage caused by use under this contract.
- .4 Pay costs for installation, maintenance and removal.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 1.189-[00], Exterior Alkyd Primer for Wood.
 - .2 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
- .3 CSA Group (CSA)
 - .1 CSA-A23.1/A23.2-[04], Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CSA-0121-[M1978(R2003)], Douglas Fir Plywood.
 - .3 CAN/CSA-S269.2-[M1987(R2003)], Access Scaffolding for Construction Purposes.
 - .4 CAN/CSA-Z321-[96(R2001)], Signs and Symbols for the Occupational Environment.
- .4 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide Submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.03 INSTALLATION AND REMOVAL

- .1 For each Place of the Work prepare site plan indicating proposed location and dimensions of the Construction Area to be fenced and used by Contractor, number of trailers if required, area for parking vehicles, avenues of ingress/egress to fenced area and details of fence installation. Construction Area shall be within the area indicated in the Contract Drawings. Submit site plan to Consultant for review and Acceptance.
- .2 Indicate use of supplemental or other staging areas.
- .3 Provide construction facilities in order to execute Work expeditiously.
- .4 After use remove from site all such work installed under this section 01 52 00 – Construction Facilities. Reinstate area to same or better state before start of Project.

1.04 SCAFFOLDING

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain scaffolding, ramps, ladders, platforms, temporary stairs.

1.05 HOISTING

- .1 Provide, operate and maintain hoists, cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.
- .2 Hoists and cranes to be operated by qualified operator.

1.06 ELEVATORS

- .1 When applicable, permanent elevators are not to be used by Contractor, Subcontractor or supplier personnel or for transporting of materials unless approved by the Owner. Co-ordinate use with the Owner if use is permitted.
- .2 If use of elevators is approved by the Owner, provide protective coverings for finish surfaces of walls, floors and entrances.

1.07 SITE STORAGE/LOADING

- .1 Confine Work and operations of employees to the Construction Area. Do not unreasonably encumber premises with Products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work. Be solely responsible and liable for damages resulting from violation of this requirement.
- .3 Products shall be stored only in areas designated or approved by the Consultant and shall not be left on the ground or in undesignated areas.
- .4 Site storage and loading requirements to be in accordance with Ontario Occupational Health and Safety Act and Regulations for Construction Projects.

1.08 CONSTRUCTION PARKING

- .1 Parking may be permitted on site provided it does not disrupt performance of Work. Arrange with the Consultant and obtain approval before site usage. Show location of agreed parking on site plan.
- .2 Parking within the Construction Area shall be managed by the Contractor as long as it does not affect work performance or Safety.
- .3 Provide and maintain adequate access to Project sites.
- .4 Parking arrangements shall be in accordance with location specific restrictions contained in section 011400 – Work Restrictions.

1.09 TEMPORARY SECURITY

- .1 Contractor is responsible for the security of the Place of the Work and any off-site other locations used by the Contractor for the execution of the Contract such as off-site temporary storage spaces.
 - .1 Temporary Site Security:
 1. Site Fencing: Before beginning excavation and before construction activities begin, provide temporary site enclosure fencing with lockable gates to prevent unauthorized access.
 2. Extent of Fencing: To enclose entire Project site or a portion sufficient to accommodate construction activities as indicated on Drawings.

3. Distribute gate keys to authorized personnel only. Supply Consultant and Owner with one set of keys each.
- .2 Temporary Building Security:
 1. Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized access, vandalism, theft, and similar security violations.
 2. Distribute building entrance keys to authorized personnel only. Supply Owner and Consultant with one set of keys each.

1.10 OFFICES

- .1 Provide one field office for the duration of the Work. The field office can be located within the Contractor Construction trailer and shall have proper heating, lighting, and ventilation and be of sufficient size to accommodate site meetings.
- .2 Provide one workspace in field office for use by the Owner and the Consultant.
- .3 Provide marked and fully stocked first-aid case in a readily available location.
- .4 Subcontractors to provide their own offices as necessary. Arrange with the Consultant location of these offices.
- .5 Maintain offices in a clean condition.

1.11 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof storage space (seas, sheds, etc.) for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof storage space on site in manner to cause least interference with work activities.
- .3 Ensure all equipment, tools and materials (including salvaged material) are stored clear of the rail Right of Way in a position where it they will not interfere with train operations and employee movements. Ensure all equipment, tools and materials and are secured in such a manner that they cannot fall or be placed foul of the rail line.

1.12 SANITARY FACILITIES

- .1 Provide sanitary facilities for workforce in accordance with governing regulations and ordinances and in accordance with 01 51 00 – Temporary Facilities.
- .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

1.13 CONSTRUCTION SIGNAGE

- .1 No other signs or advertisements, other than warning signs, are permitted on site.
- .2 Signs and notices for safety and instruction in English Graphic symbols to CAN/CSAZ321.
- .3 Maintain approved signs and notices in good condition for duration of Project and dispose of offsite on completion of Project or earlier if directed by the Consultant.

- .4 Provide signage in compliance O. Reg. 213/91 CONSTRUCTION PROJECTS, Canada Occupational Health and Safety Regulations SOR/86-304, Ontario Occupational Health and Safety Act, R.S.O. 1990 and applicable laws and standards.
- .5 The Owner may supply or instruct the Contractor to supply other signs. Signs shall be installed by the Contractor. Specification of signage will be provided by the Owner. Any additional cost will be valued as per Contract Documents.

1.14 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by the Consultant.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor shall be responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary only after obtaining the Consultant's approval.
- .8 Access roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by the Owner.
- .12 Lighting: to assure full and clear visibility for full width of access road and work areas during night work operations.
- .13 Provide snow removal during period of Work.
- .14 Remove, upon completion of Work, access roads designated by the Owner.

1.15 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities at a location approved by the Consultant.

2.01 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of Authorities Having Jurisdiction, sediment and erosion control drawings, sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of Authorities Having Jurisdiction, whichever is more stringent.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

END OF SECTION

1 General

1.1 SUMMARY

- .1 This Specification covers the operational requirements and traffic control for heavy civil contracts when roadway traffic is to be accommodated during construction.
- .2 The Contractor shall complete all Work relevant to this section in accordance with Ontario Provincial Standard Specification (OPSS):
 - .1 OPSS.PROV 706 – TEMPORARY TRAFFIC CONTROL DEVICES
 - .2 Sections – Measurement for Payment and Basis of Payment are not used.

1.2 RELATED REQUIREMENTS

- .1 Section 32 11 16.01 - Granular Sub-base
- .2 Section 32 11 23 - Aggregate Base Courses
- .3 Section 32 12 16 - Asphalt Paving

1.3 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 Ministry of Transportation, Ontario (MTO) – Ontario Traffic Manual, Book 7: Temporary Conditions.

1.4 PROTECTION OF PUBLIC TRAFFIC

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2 When working on travelled way:
 - .1 Place equipment in position to minimize interference and hazard to travelling public.
 - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
 - .3 Do not leave equipment on travelled way overnight.
- .3 Close lanes of road only after receipt of written approval from Owner and Authority Having Jurisdiction (AHJ).
 - .1 Before re-routing traffic, erect suitable signs and devices to Ontario Traffic Manual, Book 7: Temporary Conditions.
- .4 Keep travelled way graded, free from potholes and of sufficient width for required number of lanes of traffic.
 - .1 Provide 7 m wide minimum temporary roadway for traffic in two-way sections through Work and on detours.
 - .2 Provide 5 m wide minimum temporary roadway for traffic in one-way sections through Work and on detours.
- .5 Provide gravelled detours or temporary roads as needed to facilitate passage of traffic around restricted construction area:

- .1 Place and compact granular sub-base in accordance with Section 32 11 16.01- Granular Sub-base.
- .2 Place and compact granular base in accordance with Section 32 11 23- Aggregate Base Courses.
- .3 Place and compact asphalt concrete pavement in accordance with Section 32 12 16 - Asphalt Paving.
- .6 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of Owner and AHJ.

1.5 INFORMATION AND WARNING DEVICES

- .1 Provide and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices to Ontario Traffic Manual, Book 7: Temporary Conditions.
- .3 Place signs and other devices in locations recommended in Ontario Traffic Manual, Book 7: Temporary Conditions.
- .4 Meet with Owner and AHJ, as needed, prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Owner and AHJ.
- .5 Continually maintain traffic control devices in use:
 - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Remove or cover signs which do not apply to conditions existing from day to day.

1.6 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag personnel, trained in accordance with, and properly equipped to Ontario Traffic Manual, Book 7: Temporary Conditions for situations as follows:
 - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
 - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
 - .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
 - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
 - .5 For emergency protection when other traffic control devices are not readily available.
 - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .7 At each end of restricted sections where pilot cars are required.
 - .8 Delays to public traffic due to contractor's operators: 15 minutes maximum.

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- .2 Where roadway, carrying two-way traffic, is restricted to one lane, for 24 hours each day, provide portable traffic signal system.
 - .1 Adjust, as necessary, and regularly maintain system during period of restriction.
 - .2 Ensure signal system meets requirements of Ontario Traffic Manual, Book 7: Temporary Conditions.

1.7 OPERATIONAL REQUIREMENTS

- .1 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified and approved by Owner and AHJ to protect and control public traffic, existing conditions for traffic to be restricted.
- .2 Maintain existing conditions for traffic crossing right-of-way.

2 Products

NOT USED

3 Execution

NOT USED

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
 - .2 CAN/CGSB 1.189-[00], Exterior Alkyd Primer for Wood.
- .3 CSA Group (CSA)
 - .1 CSA-O121-[M1978(R2003)], Douglas Fir Plywood.

1.02 RELATED REQUIREMENTS

- .1 Section 01 14 00 – Work Restrictions
- .2 Section 01 52 00 – Construction Facilities
- .3 Section 01 55 26 – Traffic Controls
- .4 Section 01 57 00 – Temporary Controls.
- .5 Section 01 74 00 – Cleaning
- .6 Section 01 74 19 – Waste Management and Disposal.

1.03 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

1.04 HOARDING

- .1 Unless otherwise specified, erect temporary site enclosures using self-supporting 1.8m high metal fence. Provide lockable truck gate(s). Maintain fence in good repair.
- .2 Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

1.05 GUARD RAILS AND BARRICADES

- .1 Provide secure, rigid guard rails and barricades as required by applicable Laws, codes and governing authorities.

1.06 WEATHER ENCLOSURES

- .1 Provide weather tight closures to unfinished door and window openings, and other openings in floors and roofs.

- .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Design enclosures to withstand wind pressure and snow loading.

1.07 DUST TIGHT SCREENS

- .1 Provide dust tight screens or insulated partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such Work is complete.

1.08 ACCESS TO SITE

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

1.09 PUBLIC TRAFFIC FLOW

- .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public.
- .2 Ensure public use of operational facilities is protected appropriately. Reference section 01 14 00 – Work Restrictions, for details of operational facilities.

1.10 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.11 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

1.12 PROTECTION OF FINISHES

- .1 Provide protection for finished and partially finished finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with the Owner locations and installation of protection of finishes five (5) Working Days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

1.13 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for recycling in accordance with Sections 01 74 00 – Cleaning and 01 74 19 – Waste Management and Disposal.

END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 This Specification covers the requirements for temporary controls of soil erosion and sediment loss, control of pests, control of pollution entering the soil, prevention of pollution in stormwater, control of site dust, and site security.

1.02 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 The Contractor shall complete all Work relevant to this section in accordance with Ontario Provincial Standard Specification (OPSS):
 - .1 OPSS.PROV 804 – TEMPORARY EROSION CONTROL
 - .2 OPSS.PROV 805 – TEMPORARY SEDIMENT CONTROL
 - .3 Sections – Measurement for Payment and Basis of Payment are not used.

1.03 TEMPORARY PEST CONTROL

- .1 Perform pest control to minimize attraction and harboring of rodents, insects, and other pests. Perform extermination and control procedures at regular intervals.
- .2 Project shall be free of pests and their residues at Substantial Performance of the Work.
- .3 Perform pest control in accordance with integrated pest management principles with no hazardous or toxic substances released into stormwater or environment.

1.04 TEMPORARY ENVIRONMENTAL CONTROL

- .1 Use construction methods that comply with environmental regulations and minimize possible air, waterway, and subsoil contamination and pollution.
- .2 Meetings: Train persons on equipment fueling, spill prevention and response, good housekeeping protocols, material handling, and waste material handling before their first day on site.
- .3 Management:
 - .1 Monitor and repair leaks of polluting liquids on vehicles. Prevent leaks of antifreeze, brake fluid, diesel fuel, gasoline, oil, transmission fluid, and other liquids that may be harmful to the environment or storm drainage systems.
 - .2 Store petroleum products in clearly labelled sealed containers. Provide spill kits and impermeable tarps at fueling and maintenance areas.
 - .3 Supply a collection skid or similar material for waste materials.
 - .4 Tightly seal and store paint containers, sealers, and curing compounds in a protected location when not required. Prevent excess materials from discharging into storm drainage system.
 - .5 Prevent concrete trucks from discharging surplus concrete or drum wash water on site.
 - .6 Place absorbent materials to soak up excess form release agents. Replace absorbent materials when saturated.
 - .7 When applying fertilizer, minimize the discharge of pollutants into stormwater.

1.05 TEMPORARY SITE DUST CONTROL

- .1 Provide measures to prevent airborne dust to adjacent properties and walkways

according to requirements of AHJ and meeting requirements of authority having jurisdiction, including but not limited to the local municipality.

- .2 Create and implement a site-specific dust control plan.
- .3 Dust Control Windbreaks: Geotextile fabric attached to snow or temporary site fencing with fence posts and tie wires. Other measures will be considered.
- .4 If surface water taking in excess of 50,000 L/day is required for dust suppression or other activities, the contractor is to prepare an Environmental Activity and Sector Registry (EASR) as outlined in Ontario Regulation 63/16 (O. Reg.), made under the Environmental Protection Act, Registrations Under Part 11.2 of the Act – Water Taking.

1.06 TEMPORARY SECURITY

- .1 Temporary Site Security:
 - .1 Site Fencing: Before beginning excavation and before construction activities begin, provide temporary site enclosure fencing with lockable gates to prevent unauthorized access.
 - .2 Extent of Fencing: To enclose entire Project site or a portion sufficient to accommodate construction activities as indicated on Drawings.
 - .3 Distribute gate keys to authorized personnel only. Supply Owner with one set of keys.
- .2 Temporary Building Security:
 - .1 Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized access, vandalism, theft, and similar security violations.
 - .2 Distribute building entrance keys to authorized personnel only. Supply Owner with one set of keys.

1.07 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit information in accordance with Section 01 33 00 - Submittal Procedure.
- .2 Submit the following:
 - .1 Stormwater Pollution Control Plan (SWPCP): Submit SWPCP indicating methods, plans, and details of controls including:
 - .1 SWPCP coordinator information and their responsibilities
 - .2 Stormwater pollution prevention team to assist in implementation of SWPCP during construction
 - .3 Description of existing site conditions, including:
 - .1 existing land use of the site, such as wooded areas, grassed areas, pavements, buildings, and other structures,
 - .2 location of surface waters on or adjacent to Project site, such as lakes, ponds, rivers, streams, wetlands, and similar water features,
 - .3 soil types on Project site,
 - .4 water bodies that will receive site runoff, including the eventual main body of water that receives stormwater, and

- .5 drainage areas and potential stormwater contaminants.
- .4 Stormwater management controls and various Best Management Practices required to reduce erosion, sediment, and pollutants in stormwater discharge.
- .5 Proposed waste water management equipment and materials.
- .6 Facility monitoring plan and how controls will be coordinated with construction activities.
- .7 Schedule and allowances to amend the plan if required.
- .8 Sample inspection log.
- .2 Erosion and Sedimentation Control Plan:
 - .1 Submit drawings indicating location of erosion and dust control methods,
 - .2 Describe methods for maintaining, cleaning and repairing erosion and dust control methods, and
 - .3 Submit product data indicating actual materials including:
 - .1 Measures used to prevent soil loss by stormwater runoff and wind erosion.
 - .2 Methods used to protect soil stockpiles and berms.
 - .3 Methods used to prevent loss of sediment into storm sewers or adjacent waterways.
 - .4 Methods to prevent site dust and particulate matter pollution.
- 3 During the course of work, submit detailed digital photographs indicating temporary sediment and erosion control measures.
- .4 Site Quality Control Submittals: Submit logs of inspection and maintenance of control measures.

2 PRODUCTS

2.1 REGULATORY REQUIREMENTS

- .1 Protect storm sewers and roadways in accordance with local municipal requirements.
- .2 Protect waterways and ground water in accordance with AHJ.
- .3 The Contractor is notified of the presence of existing utilities within Project limits, including but not limited to Bell, North Bay Hydro, Enbridge, Hydro One, Northern Ontario Wire. Care shall be taken during construction operations to avoid damages to the existing utilities. The Contractor shall provide protection and/or support to all existing utilities as required to facilitate their construction operations. The Contractor shall familiarize themselves with utility plans prior to undertaking works in these locations.

3 EXECUTION

3.1 CLOSEOUT ACTIVITIES

- .1 Remove temporary control measures shortly before Substantial Performance of the Work or when acceptable to the Owner.

-
- .2 Restore landscape areas that were damaged by temporary control measures.

3.2 MAINTENANCE

- .1 Inspection and Maintenance:
 - .1 Inspect, repair, and maintain temporary control measures during construction.
 - .2 Inspect control measures weekly to prevent unwanted situations such as odours, mosquitoes, and weeds. Confirm control measures are working properly. Repair or replace when required.
 - .3 Repair silt fences and erosion control fabric when damaged.
 - .4 Perform non-routine inspection and maintenance arising from unplanned incidents such as repairs after severe weather and accidental damage.
 - .5 Record each inspection and maintenance event in a daily log. Keep a copy of logs at the Project site. Maintain permanent file of logs until final acceptance of the Work.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 11 00 - Summary Of Work.
- .2 Section 01 45 00 - Quality Control.
- .3 Section 01 73 00 – Execution.

1.03 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials in execution of Work.
- .3 Defective Products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility but is precaution against oversight or error. Remove and replace defective Products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.
- .5 Unless otherwise indicated in Specifications, maintain uniformity of manufacture for any particular or like item.
- .6 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.04 AVAILABILITY

- .1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of Products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify the Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, the Owner reserves right to substitute more

readily available products of similar character, at no increase in Contract Price or Contract Time.

1.05 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store Products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled Products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store Products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious Products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber, etc. on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged Products at own expense and to satisfaction of the Consultant.
- .9 Touch-up damaged factory finished surfaces at own expense and to the Consultant satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.06 TRANSPORTATION

- .1 Pay costs of transportation of Products required in performance of Work, unless otherwise specified.
- .2 Transportation cost of Products Supplied By Others will be paid for by the Owner. Unload, handle, store and protect such Products.

1.07 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in Specifications, install or erect Products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
- .2 Notify the Consultant in writing, of conflicts between Specifications and manufacturer's instructions, so that the Consultant will establish course of action.
- .3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes the Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.

1.08 QUALITY OF WORK

- .1 Ensure quality of Work is of highest standard, executed by workers experienced and skilled in

respective duties for which they are employed. Immediately notify the Consultant if required Work is such as to make it impractical to produce required results.

- .2 Do not employ anyone unskilled in their required duties. The Owner and the Consultant reserve the right to require dismissal from site workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with the Consultant, whose decision is final.

1.09 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.
- .3 Co-ordinate with the Consultant delivery times. Ensure to provide sufficient notices for large deliveries that may impact traffic or block roads.

1.10 CONCEALMENT

- .1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform the Consultant if there is interference. Install as directed by the Consultant.

1.11 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.12 LOCATION OF FIXTURES

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform the Consultant of conflicting installation and propose alternative solution for Acceptance.

1.13 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.

- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.14 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Unless otherwise specified, use heavy hexagon heads, semi-finished. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.15 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building or structures. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of the Consultant.

1.16 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, [and/or building occupants] [and pedestrian and vehicular traffic].
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 RELATED REQUIREMENTS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 45 00 – Quality Control.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit the following before Work begins at the Place of Work:
 - .1 Service locations: Document locations and extents of service lines in work areas.
- .3 Submit the following informational submittals as Work progresses:
 - .1 Land Survey information: Name address, and registration information.
- .4 Submit documentation that verifies accuracy of site engineering work when requested by the Consultant.
- .5 Submit certificate signed by surveyor indicating elevations and locations of completed Work that conform to Contract Documents and those that do not conform.

1.04 QUALIFICATIONS

- .1 Surveyor: Qualified, registered land surveyor, licensed to practice at the Place of the Work, and acceptable to the Consultant.

1.05 SETTING OUT OF WORK

- .1 Survey existing conditions and correlate with all requirements indicated in the Specifications.
- .2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .3 Provide devices needed to lay out and construct work.
- .4 Review existing conditions and identify, in writing to the Consultant, any conditions that differ materially from those indicated in the Contract Documents.

1.06 RECORDS

- .1 Maintain a complete, accurate log of control and survey work as Work progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing

dimensions, locations, angles, and elevations of Work. Keep copies available at the job site with other progress documentation. Submit to the Consultant at request.

- .3 Record locations of maintained, re-routed, and abandoned service lines.
- .4 Provide a final survey of building and structure location, surrounding grades as affected by the Work and buried utilities.

1.07 SUBSURFACE CONDITIONS

- .1 Promptly notify the Consultant in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should the Consultant determine that conditions do differ materially, instructions will be issued by the Owner for changes in Work as provided in Changes and Change Orders.

1.08 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Employ competent person to lay out Work in accordance with the Contract Documents.
- .3 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space in accordance with manufacturer's recommendations for safety, access and maintenance.
- .4 Submit Shop Drawings which indicate relative position of various services and equipment to the Consultant for review and Acceptance. Contractor is responsible for coordination of all equipment and services before installation.

2.01 NOT USED

- .1 Not Used.

3.01 EXAMINATION REQUIREMENTS

- .1 Verification of Conditions:
 - .1 Verify that substrate and other conditions are acceptable for installation of materials, assemblies, and systems in accordance with manufacturer's instructions and recommendations.
 - .2 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
 - .3 After uncovering, inspect conditions affecting performance of Work.
 - .4 Examine conditions, with installers, for defects affecting performance of the Work. Where Work of one Section depends on Work of other Sections being properly completed, verify

that Work is complete and suitable to receive the subsequent work.

- .5 Proceed with installation only after unacceptable conditions are remedied.
 - .6 Proceeding with cutting, patching, or installation will be considered Contractor's acceptance of existing conditions.
- .2 Existing Services:
- .1 Confirm locations and extent of service lines in area of Work before beginning work on site. Submit findings.
 - .2 Immediately notify the Consultant if unknown services are encountered. Confirm findings in writing.
 - .3 Remove abandoned service lines within 2 m of structures. Cap or seal lines at cut-off points as indicated on Drawings.
- .3 Pre-Installation Testing:
- .1 Perform manufacturer-recommended pre-installation site test of substrate and submit to the Consultant a report of test results indicating whether test results meet the manufacturer's minimum requirements and recommendations.
- .4 Evaluation and Assessment:
- .1 Verify that pre-existing substrate conditions are acceptable for installation of materials, assemblies, and systems in accordance with manufacturer's instructions and recommendations.
 - .2 Proceed with installation only after unacceptable conditions are remedied. The remedial work will be completed by the Contractor to the satisfaction of the Consultant. Cost of such remedial work shall be as per Contract Documents.

3.02 PREPARATION

- .1 Protection of In-Place Conditions:
- .1 Provide supports to ensure structural integrity of surroundings. Provide devices and methods to protect other portions of Project from damage.
 - .2 Provide protection from weather and other potentially damaging conditions at areas which will be exposed when uncovering work. Maintain excavations free of water.
- .2 Perform surface preparation in compliance with Contract Documents.
- .3 Survey Reference Points:
- .1 Locate and confirm reference points before starting site Work. Protect permanent reference points during construction.
 - .2 Changes or relocations should not be made without prior written notice to the Consultant.
 - .3 Notify the Consultant if a reference point is lost or destroyed.
 - .4 Surveyor to replace reference points in accordance with original land survey.
 - .5 Notify the Consultant if a reference point requires relocation because of necessary changes in grades or locations.

4 Survey Requirements:

- .1 Unless otherwise indicated in Specifications, establish minimum two permanent benchmarks on site, referenced to established benchmarks by survey reference points. Record locations with horizontal and vertical data in Project As-Built Record Drawings.
 - .2 Establish lines and levels, location and layout, by instrumentation.
 - .3 Stake for grading, fill and topsoil placement and landscaping features.
 - .4 Stake slopes and berms.
 - .5 Establish pipe invert elevations.
 - .6 Stake batter boards for foundations.
 - .7 Establish foundation column locations and floor elevations.
 - .8 Establish lines and levels for mechanical and electrical work.
- .5 If Contractor is found to be in error, all costs incurred to correct condition shall be assumed by the Contractor, unless otherwise specified in Contract Documents.

END OF SECTION

1 GENERAL

1.01 SECTION INCLUDES

- .1 Common requirements for installing, applying, and erecting Products. Includes procedures and Submittals for cutting and patching to existing conditions and required repairs arising from tests and destructive inspections.

1.02 REFERENCE STANDARDS

1. Canadian Construction Documents Committee (CCDC)
 1. CCDC 2-2020, Stipulated Price Contract.

1.03 RELATED REQUIREMENTS

- .1 Section 01 14 00 – Work Restrictions
- .2 Section 01 33 00 - Submittal Procedures.
- .3 Section 01 45 00 – Quality Control.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit proof of anchor and fastener load carrying capacity for a work result, when requested.
- .3 Submit written request in advance of cutting or altering to existing conditions which may affect the following:
 - .1 structural integrity of existing elements: Submit structural details and calculations performed by a professional structural engineer registered or licensed in Province of Ontario, Canada for the Consultant review and Acceptance. Include evidence of unsatisfactory structural integrity of the elements according to the Consultant.
 - .2 integrity of weather-exposed and moisture-resistant elements.
 - .3 efficiency, maintenance, safety, or accessibility of operational elements.
 - .4 visual qualities of sight-exposed elements.
 - .5 Work of Owner or other contractor(s).
- .4 Submit a request for cutting or altering which includes:
 - .1 identification of the Project; and
 - .2 location and description of affected existing conditions including changes to structural elements, function of elements, and visual appearance of existing elements; and the

location and identification of utilities that will be temporarily out of service during cutting and patching activities.

- .5 Submit site plan drawings for each Place of the Work indicating relative location of various services and equipment upon the request of the Consultant.
- .6 Submit a work plan for review and Acceptance including:
 - .1 a statement why cutting or altering is unavoidable and describe alternatives to cutting and patching if available;
 - .2 a description of proposed Work and proposed Products;
 - .3 specific description of reinstatement activities following completion of the Work.
 - .4 the effect of cutting or altering on work by Owner or other contractors;
 - .5 written acknowledgment by other contractors affected by cutting or altering, if applicable; and
 - .6 proposed date(s) and time(s) Work will be executed.

1.05 QUALIFICATIONS

- .1 Engage a structural engineer licensed at the Place of Work, to submit details and calculations when altering existing structural elements.

2 PRODUCTS

2.01 MATERIALS

- .1 Patching Materials: If possible, use the same materials found in the existing conditions, except in fire-resistance rated materials and assemblies.
- .2 Materials visible from the floor area: Use materials that visually match existing adjacent surfaces and match existing functional performance.

3 EXECUTION

3.01 COMMON INSTALLATION/APPLICATION/ERECTION REQUIREMENTS

- .1 Fit several parts together, to integrate with other Work.
- .2 Remove and replace defective and non-conforming Work.
- .3 Unless otherwise indicated in Specifications, install, or erect Products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with Products. Obtain

written instructions directly from manufacturers.

- .4 Notify the Consultant in writing, of conflicts between Specifications and manufacturer's instructions, so that the Consultant can establish course of action.
- .5 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes the Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.
- .6 Provide openings in non-structural elements for penetrations of mechanical and electrical Work.
- .7 Conceal pipes, ducts and wiring in floor, wall, partition, and ceiling assemblies in finished areas, except as indicated otherwise.
- .8 In addition to the manufacturer's recommendations for safety, access, accessibility, and maintenance, locate equipment, fixtures, and distribution systems where it shall provide minimal interference and shall maximize on usable space.
 - .1 Location of equipment, fixtures, and outlets indicated on Drawings and in Specifications are approximate.
 - .2 Notify the Consultant of impending installation and obtain Acceptance for actual locations.

3.02 BRACING AND ANCHORING

- .1 Anchors and Fasteners: Unless otherwise indicated elsewhere:
 - .1 Provide any necessary anchors and fasteners to fasten each component securely for its intended purpose. Allow for building movement, including from thermal expansion and contraction of materials and assemblies.
 - .2 Prevent electrolytic reaction between dissimilar metals and materials.
 - .3 Provide hot-dip galvanized or stainless steel anchors and fasteners for securing exterior work;
 - .4 Locate anchors and fasteners within individual load limit or shear capacity. Ensure anchors and fasteners are permanently secured.
 - .5 Where exposed to view, evenly distribute anchors and fasteners in a single area; and
 - .6 Where exposed to view, provide metal anchors, fasteners, and related accessories with the same texture, colour, and finish as adjacent materials.
- .2 Non-Conforming Work: Anchors and fasteners installed which cause substrate cracks or spalling are not acceptable.

3.03 CUTTING AND PATCHING

- .1 Proceed with cutting and patching only after the review and Acceptance by the Consultant of all Submittals listed in Article 1.03, Actions and Informational Submittals.

- .2 Perform cutting, fitting, and patching including excavation and fill, to complete Work in accordance with related technical Specification sections.
- .3 Use special techniques to avoid damaging existing conditions that will remain, and which will result in proper surfaces to receive patching and finishing.
- .4 Employ original installer to perform cutting and patching for weather-exposed elements, moisture-resistant elements, and surfaces exposed to view.
- .5 Cut rigid materials using masonry saw, core drill, or other tool recommended by the Product manufacturer or applicable industry association. Pneumatic or impact tools are not allowed on masonry work without the approval of the Consultant.
- .6 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .7 Refinish surfaces to match adjacent finishes. Refinish continuous surfaces to nearest intersection (e.g., edges of partition). Refinish assemblies by refinishing entire unit. Provide entire surface with uniform finish, colour, and texture.

3.04 ADJUSTING

- .1 Remove and replace patching that is visually unsatisfactory to the Consultant.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 PROJECT CLEANLINESS

- .1 Maintain Place of the Work in tidy condition, free from accumulation of waste material and debris.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by the Consultant.
- .3 Do not burn waste materials on site.
- .4 Clear snow and ice from access to Place of the Work, bank/pile snow in designated areas only approved by Owner, or remove from site, as agreed upon at outset of Contract.
- .5 Make arrangements with and obtain permits from Authorities Having Jurisdiction (AHJ) for disposal of waste and debris.
- .6 Provide on-site steel containers for collection of waste materials and debris.
- .7 Provide and use marked separate bins for recycling. Refer to Section 01 74 19 - Waste Management and Disposal.
- .8 Dispose of waste materials and debris at appropriate off-site facilities.
- .9 Clean interior areas prior to start of finishing Work and maintain areas free of dust and other contaminants during finishing operations.
- .10 Store volatile waste in covered metal containers and remove from premises at end of each Working Day, unless authorized otherwise by the Consultant.
- .11 Provide adequate ventilation during use of volatile or noxious substances. Use of existing or new ventilation systems is not permitted for this purpose.
- .12 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .13 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate new or existing systems or facilities.

1.03 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus Products, tools, Construction Equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others and leave Place of the Work clean and suitable for occupancy.

- .3 Prior to final review, remove remaining surplus Products, tools and Construction Equipment.
- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Owner or the Consultant.
- .5 Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from Authorities Having Jurisdiction (AHJ) for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, wood, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, floors and ceilings, and at exterior of building.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum, clean, and dust interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .14 Remove dirt and other disfiguration from exterior surfaces.
- .15 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .16 Sweep and wash clean paved areas.
- .17 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .18 Clean roofs, downspouts, and drainage systems.
- .19 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .20 Remove snow and ice from access to Place of the Work.

1.04 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for recycling in accordance with Section 01 74 19 - Waste Management and Disposal.

END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 The Project shall generate the least amount of waste possible. Contractor shall implement processes to ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors be employed by the Contractor.

1.02 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.
- .2 ASTM International (ASTM)
 - .1 ASTM E1609 01, Standard Guide for Development and Implementation of a Pollution Prevention Program

1.03 DEFINITIONS

- .1 Clean Waste: Untreated and unpainted; not contaminated with oils, solvents, sealants or similar materials.
- .2 Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, re-modeling , repair and demolition operations.
- .3 Hazardous: Exhibiting the characteristics of hazardous substances including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- .4 Non-hazardous: Exhibiting none of the characteristics of hazardous substances, including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- .5 Non-toxic: Not poisonous to humans either immediately or after a long period of exposure.
- .6 Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- .7 Recycle: To remove a waste material from the Project site to another site for remanufacture into a new product for reuse by others.
- .8 Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form; recycling does not include burning, incinerating, or thermally destroying waste.
- .9 Return: To give back reusable items or unused products to vendors for credit.
- .10 Reuse: To reuse a construction waste material in some manner on the Project site.
- .11 Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.

- .12 Sediment: Soil and other debris that has been eroded and transported by storm or well production run off water.
- .13 Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- .14 Toxic: Poisonous to humans either immediately or after a long period of exposure.
- .15 Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- .16 Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products over time through outgassing:
 - .1 Solvents in paints and other coatings;
 - .2 Wood preservatives; strippers and household cleaners;
 - .3 Adhesives in particleboard, fiberboard, and some plywood; and foam insulation.
 - .4 When released, VOC's can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, damage to the liver, kidneys, and central nervous system, and possibly cancer.
- .17 Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 RELATED REQUIREMENTS

- .1 Section 01 31 19 - Project Meetings
- .2 Section 01 33 00 - Submittal Procedures
- .3 Section 01 51 00 - Temporary Utilities
- .4 Section 01 74 00 – Cleaning.

1.05 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination: Coordinate waste management requirements with all divisions of the Work for the Project and ensure that requirements of the Waste Management Plan (WMP) are followed.
- .2 Preconstruction Meeting: During the pre-construction meeting arranged in accordance with Section 01 31 19 - Project Meetings, discuss the Contractor's Waste Management Plan and to develop mutual understanding of the requirements for a consistent policy towards waste reduction and recycling.

1.06 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit required information in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Action Submittals: Provide the following Submittals for Acceptance before starting any Work of this section:
 - .1 WMP: Submit to the Consultant for review a draft WMP including a preliminary analysis of

anticipated site-generated waste by listing a minimum of five (5) construction or demolition waste streams that have potential to generate the most volume of material indicating methods that will be used to divert construction waste from landfill and source reduction strategies. The Owner and the Consultant may provide comments within five (05) Working Days. Update as required and resubmit to the Consultant the final WMP for Acceptance within (05) Working Days.

- .2 WMP shall include, but not limited to:
 - .1 Material Streams: Analysis of the proposed jobsite waste being generated, including material types and quantities forming a part of identified material streams in the WMP materials removed from site destined for alternative daily cover at landfill sites and land clearing debris cannot be considered as contributing to waste diversion and will be included as a component of the total waste generated for the site.
 - .2 Recycling Haulers and Markets: Investigate local haulers and markets for recyclable materials, and incorporate into WMP.
 - .3 Alternative Waste Disposal: Prepare a listing of each material proposed to be salvaged, reused, recycled or composted during the course of the Project, and the proposed local market for each material.
 - .4 Landfill Materials: materials that cannot be recycled, reused or composted.
 - .5 Landfill Options: The name of the landfill where trash will be disposed of; landfill materials will form a part of the total waste generated by the Project.
 - .6 Materials Handling Procedures: A description of the means by which any recycled waste materials will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
 - .7 Transportation: A description of the means of transportation of the recyclable materials, whether materials will be site separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site, and destination of materials.

1.07 PROJECT CLOSEOUT SUBMITTALS

- .1 Diversion Documentation: Submit as constructed information in accordance with Section 01 78 00 - Closeout Submittals as follows:
 - .1 Waste Management Report: Submit for this Project in a format acceptable to submittal requirements and that includes the following information:
 - .1 Accounting: Submit information indicating total waste produced by the Project.
 - .2 Composition: Submit information indicating types of waste material and quantity of each material.
 - .3 Diversion Rate: Submit information indicating total waste diverted from landfill as a

percentage of the total waste produced by the Project.

- .4 Submit copies of transportation documents or shipping manifests indicating weights of materials, and other evidence of disposal indicating final location of waste diverted from landfill and waste sent to landfill.

1.08 DELIVERY, STORAGE, AND HANDLING

- .1 Storage Requirements: Implement a recycling/reuse program that includes separate collection of waste materials as appropriate to the Project waste and the available recycling and reuse programs in the Project area.
 - .1 Provide separate containers for reusable and/or recyclable materials such as:
 - .1 Metals.
 - .2 Wood.
 - .3 Plastics
 - .2 Handling Requirements: Clean materials that are contaminated before placing in collection containers and ensure that waste destined for landfill does not get mixed in with recycled materials:
 - .1 Deliver materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
 - .2 Arrange for collection by or delivery to the appropriate recycling or reuse facility.
 - .3 Hazardous Waste and Hazardous Materials: Handle in accordance with applicable regulations.

2.01 NOT USED

- .1 Not Used.

3.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- .1 Contractor is responsible for designating an on-site party or parties responsible for instructing workers and overseeing and documenting results of the WMP for the Project.
- .2 Distribute copies of the WMP to the job site foreman, each Subcontractor, the Owner, the Consultant and other site personnel as required to maintain WMP.
- .3 Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, composting and return methods being used for the Project to employees and Subcontractors at appropriate stages of the Project.
- .4 Layout and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, composting and return:
 - .1 Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.
 - .2 Hazardous wastes shall be separated, stored, and disposed of in accordance with local

regulations.

- .5 Submit to the Consultant a monthly summary of waste generated by the Project including details of waste diverted for recycling:
 - .1 Submittal of waste summary can coincide with application for progress payment, or similar milestone event as agreed upon between the Owner and the Contractor.
 - .2 Monthly waste summary shall contain the following information:
 - .1 The amount in tonnes or m³ and location of material landfilled,
 - .2 The amount in tonnes or m³ and location of materials diverted from landfill, and
 - .3 Indication of progress based on total waste generated by the Project with materials diverted from landfill as a percentage.

3.02 CONTRACTOR'S RESPONSIBILITY

- .1 Subcontractors shall cooperate fully with the Contractor to implement the WMP.
- .2 The Contractor shall be responsible for all additional costs incurred by the Owner and the Contractor arising from the failure to comply with the WMP.

END OF SECTION

1.01 GENERAL REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify the Consultant in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request the Owner inspection.
 - .2 The Owner Inspection:
 - .1 The Owner, the Consultant and the Contractor will inspect the Work and identify defects and deficiencies.
 - .2 Contractor to correct Work as directed.
 - .3 Completion Tasks: submit written certificates in English that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Equipment and systems: tested, adjusted and balanced and fully operational.
 - .4 Certificates required by Authority Having Jurisdiction submitted and approved.
 - .5 Operation of systems: demonstrated to Owner's personnel.
 - .6 Commissioning of equipment and systems: completed in accordance with 01 91 13 - GENERAL COMMISSIONING REQUIREMENTS and copies of final Commissioning Report submitted to the Consultant.
 - .7 Apply for certification of Substantial Performance of the Work and Ready-For-Takeover in accordance with the Contract Documents.
 - .8 Submit all Close-Out Documentation described in GC 5.5.1.2 and section 01 78 00 - Closeout Submittals
 - .9 Work: complete and ready for final inspection.
 - .4 Final Inspection:
 - .1 When completion tasks are done, request final inspection of Work by the Owner and the Consultant.
 - .2 When Work is incomplete according to the Owner or the Consultant, complete outstanding items and request re-inspection.

1.03 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 00 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials for recycling in accordance with Section 01 74 19 - Waste Management and Disposal.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 SUMMARY

- .1 Comply with the requirements of this section and other related sections. When the Project is being completed at multiple sites, the requirements shall be met at each location as applicable.

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-warranty Meeting:
 - .1 Convene meeting with the Owner and the Consultant, in accordance with Section 01 31 19 - Project Meetings to:
 - .1 Verify Project requirements.
 - .2 Review manufacturer's installation instructions and warranty requirements.
 - .3 Establish communication procedures for:
 - .1 Notifying construction warranty defects.
 - .2 Determine priorities for type of defects.
 - .3 Determine reasonable response time.
 - .2 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
 - .3 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to the Consultant for review and Acceptance the operating and maintenance manual (in English). Schedule the Submittal such that Acceptance is received prior to the commencement of training of O&M personnel.
- .3 Following completion of training of operations and maintenance personnel, provide four hard (4) copies and an electronic copy in PDF format of finalized operations and maintenance manual.
- .4 Provide spare parts, maintenance materials and special tools of same quality and manufacture as Products provided in Work.
- .5 Provide evidence, if requested, for type, source and quality of Products supplied.
- .6 Provide a complete set of As-Built Record Drawings sealed by an engineer licensed in the province

of Ontario.

- .7 Provide all other required Closeout Documentation in accordance with the Contract Documents.

1.05 OPERATIONS AND MAINTENANCE MANUAL

.1 FORMAT

- .1 Organize data as an instructional manual.
- .2 Binders: Vinyl, hard covered, 3 'D' ring, loose leaf [219 x 279] mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings:
 - .1 Identify contents of each binder on spine.
- .4 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of Project and identify subject matter of contents.
- .5 Arrange content under section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate Product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab.
 - .1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide CAD files in dwg format.

.2 CONTENTS

- .1 Table of Contents for Each Volume: provide title of Project;
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.
 - .3 Schedule of Products and systems, indexed to content of volume.
- .2 Include the following contents:
 - .1 As-Built Record Drawings
 - .2 Product data, and samples.
 - .3 Site test records.
 - .4 Inspection certificates.
 - .5 Manufacturer's certificates.
 - .6 Inventory of spare parts, special tools and maintenance materials.
 - .7 Maintenance Management System (MMS) identification system used.

- .8 WHMIS information.
- .9 WHMIS Safety Data Sheets (SDS).
- .10 Electrical Panel inventory containing a detailed inventory of electrical circuitry for each panel board. Duplicate of inventory inside each panel.
- .11 Other documents as required and specified in other sections of Specifications.
- .12 Provide digital photos, if requested, for site records.
- .3 For each Product or system:
 - .1 List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- .4 Product Data: mark each sheet to identify specific Products and component parts, and data applicable to installation; delete inapplicable information.
- .5 Provide a set of As-Built Record Drawings that accurately reflect as-constructed, as-built or as-fabricated Work and that have been sealed by a professional engineer licensed in the Province of Ontario.
 - .1 Provide hard copies within the operations and maintenance manuals and electronic copies in both native CAD format and PDF.
 - .2 Label each document "AS-BUILT RECORD" in neat, large, printed letters.
- .6 Drawings: supplement Product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .7 Typewritten Text: As required to supplement Product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- .7 Label record documents and file in accordance with section number listings.
- .8 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .9 Keep record documents and samples available for inspection by the Owner and the Consultant.
- .10 Specifications: mark each item to record actual construction, including:
 - 1. Manufacturer, trade name, and catalogue number of each Product actually installed particularly optional items and substitute items.
 - .2 Changes made by Addenda and Change Orders.
- .11 Training: Refer to Section 01 79 00 - Demonstration and Training.

.3 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
- .2 Give function, normal operation characteristics and limiting conditions.
- .3 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.

- .4 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .5 Include installed colour coded wiring diagrams.
- .6 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - 1. Include regulation, control, stopping, shut-down, and emergency instructions.
 - 2. Include summer, winter, and any special operating instructions.
- .7 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .8 Provide servicing and lubrication schedule, and list of lubricants required.
- .9 Include manufacturer's printed operation and maintenance instructions.
- .10 Include sequence of operation by controls manufacturer.
- .11 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .12 Provide installed control diagrams by controls manufacturer.
- .13 When applicable, provide Contractor's coordination drawings, with installed colour-coded piping diagrams.
- .14 When applicable, provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .15 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .16 Include test and balancing reports as specified in Section 01 45 00 - Quality Control and Section 01 91 13 - General Commissioning Requirements.
- .17 Additional requirements: As specified in individual Specification sections.

.4 MATERIALS AND FINISHES

- .1 Building Products, applied materials, and finishes: Include Product data, with catalogue number, size, composition, and colour and texture designations.
 - 1. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .2 Moisture-protection and weather-exposed Products: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Additional requirements: As specified in individual Specifications sections.

1.06 FINAL SURVEY

- .1 Submit final site survey certificate in accordance with Section 01 71 00 - Examination and Preparation, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

1.07 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual Specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to site; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to the Consultant.
 - .2 Include approved listings in operation & maintenance manual.
 - .5 Obtain receipt for delivered products and submit before final payment.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual Specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to site; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to the Consultant.
 - .2 Include approved listings in operation & maintenance manual.
 - .5 Obtain receipt for delivered Products and submit before final payment.
- .3 Special Tools:
 - .1 Provide special tools, in quantities specified in individual Specification section.
 - .2 Provide items with tags identifying their associated function and equipment.
 - .3 Deliver to site; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to the Consultant.
 - .2 Include approved listings in operation & maintenance manual.

1.08 DELIVERY, STORAGE, AND HANDLING

- .1 Store, at a location agreed with the Consultant, spare parts, maintenance materials, and special

tools in a manner to prevent damage or deterioration.

- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged Products at own expense to the satisfaction of the Owner and the Consultant.

1.09 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to warranties and extended warranties.
- .2 Submit warranty management plan, twenty (20) Working Days before planned pre-warranty meeting, to the Consultant review and Acceptance.
- .3 Warranty management plan to include required actions and documents to assure that the Owner receives all warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase with each application for payment.
- .6 Assemble approved information in binder, submit upon acceptance of Work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by Subcontractors, suppliers, and manufacturers, within ten (10) days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute Submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Early Occupancy or Ready-for-Takeover is verified.
- .8 Conduct joint 04 month and 09 month warranty inspection, measured from date determined above in clause 1.14.7.
- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, Subcontractors, manufacturers, or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items.
 - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:

- .1 Name of item.
- .2 Model and serial numbers.
- .3 Location where installed.
- .4 Name and phone numbers of manufacturers or suppliers.
- .5 Names, addresses and telephone numbers of sources of spare parts.
- .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
- .7 Cross-reference to warranty certificates as applicable.
- .8 Starting point and duration of warranty period.
- .9 Summary of maintenance procedures required to continue warranty in force.
- .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
- .11 Organization, names and phone numbers of persons to call for warranty service.
- .12 Typical response time and repair time expected for various warranted equipment.
- .4 Contractor's plans for attendance at 04 and 09 month post-construction warranty inspections.
- .5 Procedure and status of tagging of equipment covered by extended warranties.
- .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.

1.10 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil- and water-resistant tag approved by Owner.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of Acceptance until Project is accepted for occupancy.
- .4 Indicate the following information on tag:
 - .1 Type of product/material.
 - .2 Model number.
 - .3 Serial number.
 - .4 Contract number.
 - .5 Warranty period.
 - .6 Inspector's signature.
 - .7 Construction Contractor.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.02 ADMINISTRATIVE REQUIREMENTS

- .1 Demonstrate scheduled operation and maintenance of equipment and systems to Owner's personnel before date of Substantial Performance of the Work.
- .2 The Owner will provide a list of personnel to receive instructions and coordinate their attendance at agreed-upon times.
- .3 Preparation:
 - .1 Verify conditions for demonstration and instructions comply with requirements.
 - .2 Verify that designated personnel are present.
 - .3 Ensure equipment has been inspected and put into operation in accordance with specified Contract Documents.
 - .4 Ensure testing, adjusting, and balancing have been performed in accordance with Section 01 91 13 - General Commissioning Requirements, and equipment and systems are fully operational.
- .4 Demonstration and Instructions:
 - .1 Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, and maintenance of each item of equipment at agreed-upon times at the designated location.
 - .2 Instruct personnel in phases of operation and maintenance using operations and maintenance manuals as basis of instruction.
 - .3 Review contents of operations and maintenance manual in detail to explain aspects of operation and maintenance.
 - .4 Prepare and insert additional data in operations and maintenance manuals when needed during instructions.
- .5 The amount of time to be provided for instruction of each item of equipment or system shall be agreed with the Owner in advance.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit, for Acceptance, a plan including a schedule of times and dates for the demonstration of each item of equipment and each system. Ensure plan is submitted such that Acceptance is received two weeks before designated dates.
- .3 Submit reports within one week after completion of demonstration, provided that demonstration

and instructions have been satisfactorily completed.

- .4 Include in report time and date of each demonstration, with list of persons present.
- .5 Provide sufficient copies of completed operations and maintenance manuals for use in demonstrations and instructions.

1.04 QUALITY ASSURANCE

- .1 When specified in individual Sections requiring manufacturer to provide authorized representative to demonstrate operation of equipment and systems:
 - .1 Provide demonstration and training as per this section.
 - .2 Submit written report that demonstration and instructions have been completed.

END OF SECTION

1 GENERAL

1.01 SUMMARY

1.02 This section includes general requirements relating to commissioning (Cx) of Project components and systems, specifying general requirements for performance verification (PV) of components, equipment, sub-systems, systems, and integrated systems.

1.03 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract.

1.04 RELATED REQUIREMENTS

- .1 Section 01 31 19 – Project Meetings
- .2 Section 01 32 16.16 Construction Progress Schedule Critical Path Method
- .3 Section 01 45 00 - Quality Control.
- .4 Section 01 77 00 - Closeout Procedures.
- .5 Section 01 78 00 - Closeout Submittals.
- .6 Section 01 79 00 - Demonstration and Training.
- .7 01 91 13.13 – Commissioning Plan
- .8 01 91 13.16 – Commissioning Forms

1.05 ABBREVIATIONS

- .1 AFD: Alternate Forms of Delivery, service provider
- .2 Cx: Commissioning
- .3 EMCS: Energy Monitoring and Control Systems
- .4 O&M: Operations and Maintenance.
- .5 PI: Product Information
- .6 PV: Performance Verification
- .7 TAB: Testing, Adjusting and Balancing.

1.06 ADMINISTRATIVE REQUIREMENTS

.1 Coordination:

- .1 The Consultant will observe some or all commissioning activities at their discretion.
- .2 Owner's Performance Testing: Performance testing of equipment or systems by the Owner or the Consultant will not relieve Contractor from compliance with specified start-up and testing procedures.
- .3 Cooperate fully with the Owner and the Consultant during stages of Acceptance and Ready-for-Takeover.
- .4 Coordination with Authorities Having Jurisdiction (AHJ):
 - .1 Where specified start-up, testing or commissioning procedures duplicate verification requirements of AHJ, arrange for AHJ to witness procedures to avoid duplication of tests and to facilitate an earlier acceptance of equipment or facility.
 - .2 Obtain certificates of approval, acceptance, and compliance with rules and regulations of AHJ.
 - .3 Submit copies of certificates to the Consultant within three (03) days of test.

.2 Commissioning Meetings:

- .1 Arrange Cx meeting(s) as per this section and in accordance with other Specification sections.
- .2 Provide agenda, in accordance with section 01 91 13 – Project Meetings, a minimum of five (05) Working Days before meeting(s).
- .3 Use Cx meetings to resolve issues, monitor progress, and identify defects and deficiencies relating to Cx.
- .4 Continue Cx meetings on a regular basis, including during equipment start-up period, and functional testing period until commissioning deliverables have been addressed.
- .5 At 60% construction completion stage arrange a separate Cx scope meeting to review progress, discuss schedule of equipment start-up activities and prepare for Cx. Additional agenda topics include the following:
 - .1 Review duties and responsibilities of Contractor and Subcontractors, addressing delays and potential problems.
 - .2 Determine the degree of involvement of Subcontractors and manufacturer's representatives in the Cx process.
- .6 Ensure Subcontractors and relevant manufacturer representatives are present at 60% construction completion stage, at subsequent Cx meetings, and when otherwise required.

.3 Observation of Starting and Testing:

- .1 Provide twenty (20) Working Days' notice before beginning commissioning.

- .2 The Owner and the Consultant will observe start-up and testing.
- .3 The Consultant and/or Owner may be present at tests performed and documented by Subcontractors, suppliers, and equipment manufacturers.
- .4 Conflicts:
 - .1 Report conflicts between requirements of this section and other sections to the Consultant and obtain interpretation or clarification before starting commissioning work.
 - .2 Failure to report conflicts and obtain interpretation or clarification will result in application of the more stringent requirement.
- .5 Excess Administration:
 - .1 Contractor shall pay the costs related to Consultant's excess contract administration if third and subsequent verifications occur where:
 - .1 Verification of reported results fail to receive the Owner or Consultant's Acceptance.
 - .2 Repetition of second verification again fails to receive Acceptance.
 - .3 The Consultant deems Contractor's request for second verification was premature.
 - .2 The cost of the Consultant's excess contract administration will be based on a rate of \$260 per hour.

1.07 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Submit, for review and Acceptance, no later than six (06) weeks after award of Contract:
 - .1 draft Cx documentation and
 - .2 preliminary Cx schedule.
 - .2 Request changes to Submittals in writing to the Consultant and obtain written Acceptance or rejection at least eight (8) weeks before start of Cx.
 - .3 Where Cx procedures are not specified, submit proposed ones to the Consultant and obtain written Acceptance at least eight (8) weeks before start of Cx.
 - .4 Submit additional documentation relating to Cx process as required by the Consultant.
 - .5 If instruments installed in Contract will be used for Cx of TAB and PV, then submit TAB and PV instrument calibration certificates for review.
 - .6 Submit EMCS sensor calibration certificates.
- .2 Commissioning Schedule:

- .1 Create and submit detailed Cx schedule in accordance with section 01 32 16.16 – Construction Progress Schedule and section 01 91 13.13 – Commissioning Plan. The Contractor shall ensure the Cx schedule is incorporated into the Construction Schedule.
- .2 Allow in the schedule adequate time for Cx activities such that activities are completed prior to the required occupancy date, including commissioning activities prescribed in the Specifications including:
 - .1 Acceptance of Cx reports
 - .2 Verification of reported results
 - .3 Repairs, retesting, re-commissioning, and re-verification
 - .4 Training
- .3 Start-Up Documentation:
 - .1 Assemble start-up documentation and submit to the Consultant for review and Acceptance before beginning commissioning.
 - .2 Start-up documentation to include:
 - .1 Factory and on-site test certificates for specified equipment.
 - .2 Pre-start-up inspection reports.
 - .3 Signed installation/start-up checklists.
 - .4 Start-up reports.
 - .5 Step-by-step description of complete start-up procedures so the Consultant or Owner can repeat start-up at any time.
- .4 Submit for review and Acceptance:
 - .1 Complete list of proposed instruments and equipment to perform commissioning.
 - .2 List data including, serial number, current calibration certificate, calibration date, calibration expiry date and calibration accuracy.
- .5 Commissioning Documentation:
 - .1 Submit completed Cx documentation to Consultant for review and Acceptance.

1.08 MAINTENANCE MATERIALS SUBMITTALS

- .1 Supply and document maintenance materials, spare parts, and special tools as specified in other Specification sections.

1.09 SITE CONDITIONS

- .1 Where Cx of weather-dependent, occupancy-dependent, or seasonally-dependent equipment or

systems cannot be conducted under near-rated or near-design conditions, extrapolate part-load results to design conditions, if acceptable to the Consultant, with manufacturer's assistance in accordance with equipment manufacturer's instructions, data, and approved formulae.

2.01 NOT USED

- .1 Not used.

3.01 GENERAL

- .1 Cx is a planned program of tests, procedures and checks carried out systematically on systems and integrated systems of the finished Project. Perform Cx after systems and integrated systems are completely installed, functional and Contractor's Performance Verification responsibilities have been completed and Accepted. Complete Cx in the most effective and timely manner available.
 - .1 Objectives: Verify that installed equipment, systems and integrated systems operate in accordance with Contract Documents and design criteria and intent.
- .2 Contractor shall be responsible for the entire Cx process, operating equipment and systems, troubleshooting, and making adjustments as required.
 - .1 Operate systems at full capacity under various modes to determine if they function correctly and consistently at peak efficiency. Systems should interact with each other as intended in accordance with Contract Documents and design criteria.
 - .2 Make adjustments as needed, during these checks, to enhance performance and meet environmental or user requirements.

COMMISSIONING OVERVIEW

- .1 Refer to Section 01 91 13.13 - Commissioning Plan for additional Cx responsibilities.
- .2 Cx activities supplement the site quality control and testing procedures described in relevant technical Specification sections.
- .3 Conduct Cx in coordination with other activities carried out during the Project delivery stages.
- .4 Cx shall identify issues early on in the construction stages, which are addressed during Construction and Cx stages. This step ensures the built facility meets functional and operational requirements while operating as intended under weather, environmental and occupancy conditions. Cx activities include the transfer of critical knowledge to the Owner's facility operations personnel.
- .5 The Owner will verify *Ready-For-Takeover* has been achieved in accordance with the requirements of GC 12.1.1 and after:
 - .1 Completed Cx documentation has been received, reviewed for suitability, and reviewed and Accepted by the Consultant.
 - .2 Equipment, components and systems have been commissioned, and
 - .3 O&M training has been completed.

3.02 PRE-COMMISSIONING REVIEW

- .1 Before Construction:
 - .1 Review Contract Documents and confirm in writing to the Consultant the following:
 - .1 Adequacy of provisions for Cx.
 - .2 Aspects of design and installation pertinent to success of Cx.
- .2 During Construction:
 - .1 Coordinate provision, location, and installation of provisions for Cx.
- .3 Before Beginning Cx:
 - .1 Verify Cx Plan, documentation and schedules are up-to-date.
 - .2 Verify installation of related components, equipment, systems, and sub-systems are complete.
 - .3 Review Cx requirements and procedures.
 - .4 Verify documentation used for the Cx process is shelf-ready (bound, organized, indexed, etc.).
 - .5 Review design criteria and intent, and special features to ensure full understanding.
 - .6 Submit complete start-up documentation to Consultant for Acceptance.
 - .7 Verify systems have been cleaned thoroughly.
 - .8 Complete TAB procedures on systems and submit TAB reports to Consultant for review and Acceptance.
 - .9 Verify "As-Built" system schematics are available.
- .4 Inform Consultant in writing of defects and deficiencies in installed Work together with plan for rectification.

3.03 STARTING AND TESTING

- .1 Contractor to bear all costs associated with Cx activities, including, but not limited to, costs of the following:
 - .1 inspections, including disassembly and re-assembly after approval, and for starting, testing, adjusting, and;
 - .2 temporary testing equipment.
 - .3 required personnel and test equipment.

3.04 PERFORMANCE VERIFICATION TOLERANCES

- .1 Application Tolerances:
 - .1 A specified range of acceptable deviations of measured values from specified values or specified design criteria except for special areas that shall be within +/- 10% of specified values.
- .2 Instrument Accuracy Tolerances:
 - .1 To be of higher order of magnitude than equipment or system being tested.
- .3 Measurement Tolerances During Verification:
 - .1 Unless otherwise specified, actual values shall be within +/- 2% of recorded values.

3.05 MANUFACTURER SERVICES

- .1 During factory testing, manufacturer, through the Contractor, to:
 - .1 Coordinate time and location of testing.
 - .2 Arrange for Consultant to observe testing.
 - .3 Submit testing documentation for review and Acceptance by Consultant.
 - .4 Obtain written Acceptance of test results and documentation from the Consultant before delivery to site.
- .2 Obtain manufacturer's installation, start-up and operations instructions before start-up of components, equipment and systems, and review with Consultant.
 - .1 Compare completed installation with manufacturer's published data, record discrepancies, and review with manufacturer.
 - .2 Modify procedures that may be detrimental to equipment performance and review with manufacturer before start-up.
- .3 Integrity of warranties:
 - .1 Use manufacturer's trained start-up personnel where specified in other Specification sections or where required to maintain integrity of warranty.
 - .2 Verify with manufacturer that testing as specified will not void warranties.
- .4 Qualifications of manufacturer's personnel:
 - .1 Experienced in design, installation and operation of equipment and systems.
 - .2 Ability to interpret test results accurately.
 - .3 Report results in clear, concise, logical manner.

3.06 COMMISSIONING PROCEDURES

- .1 Verify that equipment and systems are complete, clean, and operating in a normal and safe manner before conducting start-up, testing and Cx.
- .2 Conduct start-up and testing in the following distinct phases:
 - .1 Included in delivery and installation:
 - .1 Verification of conformity to Specification, reviewed and Accepted Shop Drawings and completion of PI report forms.
 - .2 Visual inspection of quality of installation.
 - .2 Start-up: Follow accepted start-up procedures.
 - .3 Operational testing: Document equipment performance.
 - .4 System PV: Include repetition of tests after correcting deficiencies.
 - .5 Post-Substantial Performance Verification: To include fine-tuning.
- .3 Correct deficiencies and obtain Acceptance from the Consultant after distinct phases have been completed and before beginning the next phase.
- .4 Document required tests on approved PV forms.
- .5 Failure to follow accepted start-up procedures may result in re-evaluation of equipment by an independent testing agency selected by the Owner. If evaluation report indicates that equipment start-up procedure was deficient and resulted in equipment damage, perform the following:
 - .1 Minor equipment/systems: Perform corrective measures acceptable to the Consultant .
 - .2 Major equipment/systems: If evaluation report indicates that equipment damage is minor, perform corrective measures acceptable to the Consultant.
 - .3 If evaluation report indicates that major equipment damage has occurred, the Consultant will reject equipment.
 - .1 Remove rejected equipment from site and replace with new equipment.
 - .2 Perform specified start-up procedures on new equipment/systems.

3.07 OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS

- .1 After start-up, operate and maintain equipment and systems as directed or recommended by equipment/system manufacturer.
- .2 With manufacturer’s assistance, develop written maintenance program and submit to Consultant for review and Acceptance before implementation.
- .3 Operate and maintain systems for length of time required for commissioning to be completed.
- .4 After completion of commissioning, operate and maintain systems until issuance of certificate of Substantial Completion.

3.08 TEST RESULTS

- .1 If start-up, testing, or PV produce unacceptable results, repair, replace or repeat specified starting or PV procedures until acceptable results are achieved.
- .2 Provide labor and materials and assume costs for re-commissioning.

3.09 START OF COMMISSIONING

- .1 Notify Consultant at least ten (10) Working Days before start of Commissioning
- .2 Start Cx after elements affecting start-up and performance verification of systems have been completed.

3.10 TEMPORARY INSTRUMENTS AND EQUIPMENT

- .1 Provide all required instruments and equipment required to complete commissioning.

3.11 COMMISSIONING PERFORMANCE VERIFICATION

- .1 Carry out Cx:
 - .1 under actual and accepted simulated operating conditions, over entire operating range, and in all modes, and
 - .2 on independent systems and interacting systems.
- .2 Cx procedures to be repeatable and reported results are to be verifiable.
- .3 Follow equipment manufacturer's operating instructions.
- .4 Where applicable, make EMCS trending information available as supporting documentation for performance verification.

3.12 EXTENT OF VERIFICATION

- .1 Laboratory areas:
 - .1 Provide labour and instrumentation to verify up to 100% of reported results.
- .2 Elsewhere:
 - .1 Provide labour and instrumentation to verify up to 30% of reported results, unless otherwise specified in other Specification sections.
- .3 Number and location to be at discretion of the Consultant.
- .4 Conduct tests repeated during verification under same conditions as original tests, using same test equipment, and instrumentation.
- .5 Review and repeat commissioning of systems if inconsistencies found in more than 20% of reported

results.

- .6 Perform additional commissioning until results are Acceptable to the Consultant.

3.13 INSTALLED INSTRUMENTATION

- .1 Use instruments installed under Contract for TAB and PV if:
 - .1 Accuracy complies with this Specification section.
 - .2 Calibration certificates have been submitted to Consultant.
- .2 Calibrated EMCS sensors may be used to obtain performance data if sensor calibration has been completed and accepted.

3.14 DEFICIENCIES DISCOVERED DURING COMMISSIONING

- .1 Correct defects and deficiencies found during the Cx process. Re-verify equipment and components within the defective or deficient system to verify proper performance, including related systems if requested by the Consultant.
- .2 Costs associated with re-commissioning defective and deficient work is the responsibility of Contractor.

3.15 MISCELLANEOUS CHECKS AND ADJUSTING

- .1 Make adjustments and changes which become apparent as Cx proceeds.
- .2 Perform static and operational checks as applicable and as required.

3.16 DEFICIENCIES AND DEFECTS

- .1 Correct deficiencies and defects found during start-up and Cx to satisfaction of Owner and the Consultant.
- .2 Report concerns, deficiencies, and defects affecting Cx to Owner and the Consultant in writing. Stop Cx until problems are rectified. Proceed only with written Acceptance from the Consultant.

3.17 CLOSEOUT ACTIVITIES

- .1 Completion of Commissioning:
 - .1 Upon completion of Cx, leave systems in normal operating mode, unless otherwise agreed with the Consultant.
 - .2 Except for warranty and seasonal verification activities specified in Cx Specifications, complete Cx before issuance of Substantial Completion Certificate of Completion.
 - .3 Cx to be considered complete when contract Cx deliverables have been submitted and Accepted by the Consultant.

.2 Activities Upon Completion of Commissioning:

- .1 When changes are made to baseline components or system settings established during Cx process, provide updated Cx form for affected item.

.3 Training:

- .1 In accordance with Section 01 79 00- Demonstration and Training.

END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 Section Includes:
 - .1 Description of overall structure of Plan and roles and responsibilities of commissioning team.

1.02 REFERENCE STANDARDS

- .1 Canadian Construction Documents Committee (CCDC)
- .2 CCDC 2-2020, Stipulated Price Contract.

1.03 RELATED REQUIREMENTS

- .1 Section 01 45 00 - Quality Control.
- .2 Section 01 77 00 - Closeout Procedures.
- .3 Section 01 78 00 - Closeout Submittals.
- .4 Section 01 79 00 - Demonstration and Training.

1.04 GENERAL

- .1 Provide fully functional facilities and or systems:
 - .1 Systems, equipment and components meet user's functional requirements before date of Acceptance, and operate consistently at peak efficiencies and within specified energy budgets under normal loads.
 - .2 Facility user and O&M personnel have been fully trained in aspects of installed systems.
 - .3 Optimized life cycle costs.
 - .4 Complete documentation relating to installed equipment and systems.
- .2 Term "Cx" in this section means "Commissioning".
- .3 Use this Cx Plan as master planning document for Cx:
 - .1 Outlines organization, scheduling, allocation of resources, documentation, pertaining to implementation of Cx.
 - .2 Communicates responsibilities of team members involved in Cx Scheduling, documentation requirements, and verification procedures.
 - .3 Sets out deliverables relating to O&M, process and administration of Cx.
 - .4 Describes process of verification of how built works meet Owner requirements.
 - .5 Produces a complete functional system prior to issuance of Certificate of Occupancy.
 - .6 Management tool that sets out scope, standards, roles and responsibilities,

expectations, deliverables, and provides:

- .1 Overview of Cx.
- .2 General description of elements that make up Cx Plan.
- .3 Process and methodology for successful Cx.

.4 Acronyms:

- .1 Cx - Commissioning.
- .2 O&M - Operations and Maintenance.
- .3 EMCS - Energy Monitoring and Control Systems.
- .4 WHMIS Safety Data Sheets (SDS).
- .5 PI - Product Information.
- .6 PV - Performance Verification.
- .7 TAB - Testing, Adjusting and Balancing.
- .8 WHMIS - Workplace Hazardous Materials Information System.

.5 Commissioning terms used in this Section:

- .1 Bumping: short term start-up to prove ability to start and prove correct rotation.
- .2 Deferred Cx - Cx activities delayed for reasons beyond Contractor's control due to lack of occupancy, weather conditions, need for heating/cooling loads.

1.05 DEVELOPMENT OF CX PLAN

- .1 Submit for Acceptance a draft Cx Plan. Cx Plan shall be 100% completed within eight (8) weeks of award of Contract. Cx Plan shall take into account:
 - .1 Shop Drawings and Product data.
 - .2 Approved changes to Contract Documents.
 - .3 Contractor's Construction Schedule.
 - .4 Cx schedule.
 - .5 Contractor's, Subcontractor's, suppliers' requirements.
 - .6 Project construction team's and Cx team's requirements.
- .2 Submit completed Cx Plan to the Consultant for Acceptance.

1.06 REFINEMENT OF CX PLAN

- .1 During construction phase, revise, refine and finalize Cx Plan to include:
 - .1 Changes resulting from Owner program modifications.
 - .2 Accepted design and construction changes.
- .2 Revise, refine and update every four (4) weeks during construction phase. At each revision, indicate revision number and date.
- .3 Submit each revised Cx Plan to Consultant for review and obtain Acceptance.
- .4 Include testing parameters at full range of operating conditions and check responses of equipment and systems.
- .5 Final Cx Plan shall be Accepted six (6) weeks prior to start of Commissioning.

1.07 COMPOSITION, ROLES AND RESPONSIBILITIES OF CX TEAM

- .1 Contractor to maintain overall responsibility for the Project and is the sole point of contact between members of commissioning team.
- .2 Contractor will select Cx Team consisting of following members:
 - .1 Quality assurance team will ensure Cx activities are carried out to ensure delivery of a fully operational Project including:
 - .1 Review of Cx documentation from operational perspective.
 - .2 Review for performance, reliability, durability of operation, accessibility, maintainability, operational efficiency under conditions of operation.
 - .3 Protection of health, safety and comfort of occupants and O&M personnel.
 - .4 Monitoring of Cx activities, training, development of Cx documentation.
 - .5 Work closely with members of Cx Team.
 - .2 Construction Team: Contractor, subcontractors, suppliers and support disciplines, are responsible for construction/installation in accordance with Contract Documents, including:
 - .6 Testing.
 - .7 TAB.
 - .8 Performance of Cx activities.
 - .9 Delivery of training and Cx documentation.
 - .10 Assigning one person as point of contact with Consultant and Cx Manager for administrative and coordination purposes.
 - .3 Contractor's Cx Agent implements specified Cx activities including:
 - .1 Demonstrations.
 - .2 Training.
 - .3 Testing.
 - .4 Preparation, submission of test reports.
 - .4 The Consultant is responsible for:
 - .1 Verifying implementation of final Cx Plan
 - .2 Monitoring of day to day Cx activities
 - .3 witnessing any or all Cx activities
 - .5 Owner: represents lead role in Operation Phase and onwards and is responsible for:
 - .1 Receiving facility.
 - .2 Day-To-Day operation and maintenance of facility.

1.08 CX PARTICIPANTS

- .1 Employ the following Cx participants, as required, to verify performance of equipment and systems:

- .1 Installation Contractor/Subcontractor:
 - .2 Equipment and systems except as noted.
- .2 Equipment manufacturer: equipment specified to be installed and started by manufacturer:
 - .1 To include performance verification.
- .3 Specialist subcontractor: equipment and systems supplied and installed by specialist subcontractor.
- .4 Specialist Cx agency:
 - .1 Possessing specialist qualifications and installations providing environments essential to client's program but are outside scope or expertise of Cx specialists on this project.
- .5 Owner:
 - .1 Coordinates Owner's staff participation in Cx activities as required.
- .6 Ensure that Cx participant:
 - .1 Could complete work within scheduled time frame.
- .7 Available for emergency and troubleshooting service during first year of occupancy by user for adjustments and modifications outside responsibility of O&M personnel as per warranties terms. Provide names of participants to the Consultant and details of instruments and procedures to be followed for Cx [8] weeks prior to starting date of Cx for review and Acceptance.

1.09 EXTENT OF CX

- .1 Commission all new systems/equipment installed as part of the Work, including but not limited to, the systems contained in section 01 11 00 – Summary of Work and detailed in the technical Specifications.

1.10 DELIVERABLES RELATING TO THE CX PROCESS

- .1 General:
 - .1 Start-up, testing and Cx requirements, conditions for acceptance and specifications form part of relevant technical sections of these specifications.
- .2 Definitions:
 - .1 Cx as used in this section includes:
 - .1 Cx of components, equipment, systems, subsystems, and integrated systems.
 - .2 Factory inspections and performance verification tests.
- .3 Deliverables: submit in accordance with 01 33 00 - Submittal Procedures:
 - .1 Cx Specifications.
 - .2 Startup, pre-Cx activities and documentation for systems, and equipment.
 - .3 Completed installation checklists (ICL).
 - .4 Completed product information (PI) report forms.
 - .5 Completed performance verification (PV) report forms.

- .6 Results of Performance Verification Tests and Inspections.
 - .7 Description of Cx activities and documentation.
 - .8 Description of Cx of integrated systems and documentation.
 - .9 Tests Reports.
 - .10 Training Plans.
 - .11 Cx Reports.
 - .12 Prescribed activities during warranty period.
- .4 Consultant to witness tests and reports of results provided to the Owner.
 - .5 Consultant may participate.

1.11 PRE-CX ACTIVITIES AND RELATED DOCUMENTATION

- .1 Items listed in the Cx Plan shall include the following:
 - .1 Pre-Start-Up inspections.
 - .2 The Consultant may monitor some or all of these pre-start-up inspections.
 - .3 Include completed documentation with Cx report.
 - .4 Conduct pre-start-up tests: conduct pressure, static, flushing, cleaning, and “bumping” during construction as specified in technical sections. To be witnessed and verified by Consultant and does not form part of Cx specifications.
 - .5 Include completed documentation in Cx report.
- .2 Complete following Pre-Cx activities as relevant to the Work with reference to technical Specifications:
 - .1 Pre-Cx activities - ARCHITECTURAL AND STRUCTURAL:
 - .2 Pre-Cx activities - MECHANICAL:
 - .1 HVAC equipment and systems:
 - .1 “Bump” each item of equipment in its “stand-alone” mode.
 - .2 At this time, complete pre-start-up checks and complete relevant documentation.
 - .3 After equipment has been started, test related systems in conjunction with control systems on a system-by-system basis.
 - .4 Perform TAB on systems. TAB reports to be Accepted by Consultant.
 - .3 Pre-Cx activities EMCS:
 - .1 EMCS trending to be available as supporting documentation for performance verification.
 - .2 Perform point-by-point testing in parallel with start-up.
 - .3 Carry out point-by-point verification.
 - .4 Demonstrate performance of systems, to be witnessed by Consultant prior to start of Final Acceptance Test period.
 - .5 Perform final Cx and operational tests during demonstration period and test period.
 - .6 Only additional testing after foregoing have been successfully completed to be “Off-Season Tests”.
 - .4 Pre-Cx activities - LIFE SAFETY SYSTEMS
 - .1 Include all equipment and systems.
 - .2 Reports of test results to be witnessed by Consultant before verification.

- .5 Pre-Cx activities - ELECTRICAL:
 - .1 High voltage distribution systems over 750 V.
 - .2 Low voltage distribution systems under 750 V.
 - .3 Requires independent testing agency to perform pre- energization and post-energization tests.
 - .4 Emergency power generation systems
 - .5 Transfer switches: test by simulating loss of power. Verify availability of power at equipment requiring same.
 - .6 Uninterruptible power systems: test under full and partial load conditions.
 - .7 Lighting systems:
 - .8 Emergency lighting systems:
 - .9 Tests to include verification of lighting levels and coverage, initially by disrupting normal power.
 - .10 Low voltage systems: these include:
 - .11 Clock, communications, low voltage lighting control systems and data communications systems.
 - .12 Security, surveillance and intrusion alarm systems: to include verification by Owner and Consultant

1.12 START-UP

- .1 Start-up components, equipment and systems.
- .2 Consultant to monitor some or all of these start-up activities.
 - .1 Rectify start-up deficiencies to satisfaction of the Consultant.
- .3 Performance Verification (PV):
 - .1 Contractor’s Cx Agent to perform.
 - .2 Repeat when necessary until results are acceptable to Consultant.
 - .3 Use modified generic procedures to suit project requirements.
 - .4 Consultant to review and Accept reported results using approved PI and PV forms.
 - .5 Owner and Consultant reserve right to verify up to 30% of reported results at random.
 - .6 Failure of randomly selected item shall result in rejection of PV report or report of system startup and testing.

1.13 CX ACTIVITIES AND RELATED DOCUMENTATION

- .1 Perform Cx using procedures developed by Contractor and Accepted by Consultant.
- .2 Consultant to monitor Cx activities.
- .3 Upon satisfactory completion, Contractor performing tests to prepare Cx Report using Accepted PV forms.
- .4 Consultant may witness reported results of Cx activities and forward to Owner.
- .5 Owner and Consultant reserve right to verify a percentage of reported results at no cost to Contractor.

1.14 CX OF INTEGRATED SYSTEMS AND RELATED DOCUMENTATION

- .1 Cx to be performed by specified Cx specialist, using procedures Accepted by the Consultant.
- .2 Tests to be witnessed by Consultant and documented on Accepted report forms.
- .3 Upon satisfactory completion, Cx specialist to prepare Cx Report, to be submitted to Consultant for review and Acceptance.
- .4 Owner and Consultant reserve right to verify percentage of reported results.

1.15 CX SCHEDULES

- .1 Prepare detailed Cx Schedule and submit to Consultant for review and Acceptance. Integrate Cx schedule into Project Construction Schedule such that there is a complete Critical Path for the entire Work. Include:
 - .1 Milestones, testing, documentation, training and Cx activities of components, equipment, subsystems, systems and integrated systems, including:
 - .1 Design criteria, design intents.
 - .2 Pre-TAB review
 - .3 Cx agents' credentials
 - .4 Cx procedures
 - .5 Cx Report format
 - .6 Discussion of heating/cooling loads for Cx
 - .7 Submission of list of instrumentation with relevant certificates
 - .8 Notification of intention to start TAB
 - .9 TAB: after successful start-up, correction of deficiencies and verification of normal and safe operation.
 - .10 Notification of intention to start Cx: 14 days before start of Cx.
 - .11 Notification of intention to start Cx of integrated systems: after Cx of related systems is completed 14 days before start of integrated system Cx.
 - .12 Identification of deferred Cx.
 - .13 Implementation of training plans.
 - .14 Cx reports: immediately upon successful completion of Cx.
 - .2 Detailed training schedule to demonstrate no conflicts with testing, completion of Project and hand-over to Owner.
 - .3 Cx schedule for verification of performance in all seasons and wear conditions.
- .2 Consultant, Contractor and Contractor's Cx Agent will monitor progress of Cx against this schedule.

1.16 CX REPORTS

- .1 Submit reports of tests, witnessed and verified by Consultant.
- .2 Include completed and certified PV reports in properly formatted Cx Reports.
- .3 Before reports are Accepted, reported results to be subject to verification by Consultant or Owner.

1.17 ACTIVITIES DURING WARRANTY PERIOD

- .1 Cx activities must be completed before issuance of Substantial Performance of the Work Certificate. It is anticipated that certain Cx activities may be necessary during Warranty Period,

including:

- .1 Fine tuning of HVAC systems.
- .2 Adjustment of ventilation rates to promote good indoor air quality and reduce deleterious effects of VOCs generated by off-gassing from construction materials and furnishings.

1.18 TRAINING PLANS

- .1 Refer to Section 01 79 00 - Demonstration and Training.

1.19 FINAL SETTINGS

- .1 Upon completion of Cx to satisfaction of the Consultant, lock control devices in their final positions, indelibly mark settings marked and include in Cx Reports.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 SUMMARY

.1 Section Includes:

.1 Commissioning forms to be completed for equipment, system and integrated system.

.2 Related Requirements

.1 Section 019113 -General Commissioning Requirements.

1.02 INSTALLATION/START-UP CHECK LISTS

.1 Include the following data:

.1 Product manufacturer’s installation instructions and recommended checks.

.2 Special procedures as specified in relevant technical sections.

.3 Items considered good installation and engineering industry practices deemed appropriate for proper and efficient operation.

.2 Equipment manufacturer’s installation/start-up check lists are acceptable for use. As deemed necessary by Consultant supplemental additional data lists will be required for specific Project conditions.

.3 Use check lists for equipment installation. Document check list verifying checks have been made, indicate deficiencies and corrective action taken.

.4 Installer to sign check lists upon completion, certifying stated checks and inspections have been performed. Return completed check lists to Consultant. Check lists will be required during Commissioning and will be included in Operations and Maintenance Manual (O&M) at completion of Project.

.5 Use of check lists will not be considered part of commissioning process but will be stringently used for equipment pre-start and start-up procedures.

1.03 PRODUCT INFORMATION (PI) REPORT FORMS

.1 Product Information (PI) forms compiles gathered data on items of equipment produced by equipment manufacturer, includes nameplate information, parts list, operating instructions, maintenance guidelines and pertinent technical data and recommended checks that is necessary to prepare for start-up and functional testing and used during operation and maintenance of equipment. This documentation is included in the operations and maintenance manual at completion of Work.

.2 Prior to Performance Verification (PV) of systems complete items on PI forms related to systems and obtain Consultant’s Acceptance.

1.04 PERFORMANCE VERIFICATION (PV) FORMS

.1 PV forms to be used for checks, running dynamic tests and adjustments carried out on equipment

and systems to ensure correct operation, efficiently and function independently and interactively with other systems as intended with Project requirements.

- .2 PV report forms include those developed by Contractor records measured data and readings taken during functional testing and Performance Verification procedures.
- .3 Prior to PV of integrated system, complete PV forms of related systems and obtain Consultant's Acceptance.

1.05 CHANGES AND DEVELOPMENT OF NEW REPORT FORMS

- .1 Develop appropriate verification forms and submit to the Consultant for Acceptance prior to use.
 - .1 Additional commissioning forms to be in same format.

1.06 COMMISSIONING FORMS

- .1 Use Commissioning forms to verify installation and record performance when starting equipment and systems.
- .2 Strategy for Use:
 - .1 Contractor's Commissioning Agent to prepare and use Project-specific Commissioning forms, Accepted by Consultant.
 - .2 Contractor will provide required Shop Drawings information and verify correct installation and operation of items indicated on these forms.
 - .3 Confirm operation as per design criteria and intent.
 - .4 Identify variances between design and operation and reasons for variances.
 - .5 Verify operation in specified normal and emergency modes and under specified load conditions.
 - .6 Record analytical and substantiating data.
 - .7 Verify reported results.
 - .8 Form to bear signatures of recording technician and reviewed and signed off by Consultant.
 - .9 Submit immediately after tests are performed.
 - .10 Reported results in true measured SI unit values.
 - .11 Provide Consultant with originals of completed forms.
 - .12 Maintain copy on site during start-up, testing and commissioning period.
 - .13 Forms to be both hard copy and electronic format with typed written results in Operation and Maintenance Manual.

1.07 LANGUAGE

- .1 English

2 PRODUCTS

2.01 NOT USED

.1 Not Used.

3 EXECUTION

3.01 NOT USED

.1 Not Used.

END OF SECTION



PART 4

REQUEST FOR PROPOSALS

FORM OF PROPOSAL

Note: Respondent is required to complete Part 4 in its entirety in order to be considered as having submitted a complete Proposal. Part 4 will be provided in Word format to Respondents who return Schedule 2-B – Participation Registration Form.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1
PROPOSAL SUBMISSION FORM**

RFP Number: RFP 2024 030

Description: New North Bay Locomotive Sand Tower

Submitted To: ONTARIO NORTHLAND TRANSPORTATION COMMISSION

We, _____
(Name of Respondent)

having carefully examined, understood, and completed the Request For Proposals Documents as described in Section 2 – The RFP Documents, and Addendum No. _____ to No. _____ Inclusive, and having familiarized ourselves thoroughly with local conditions, hereby agree to supply the services associated with the New North Bay Locomotive Sand Tower as outlined in our Proposal for a total price of:

\$ _____ (\$ _____) *excluding HST*

The price above includes any specified allowance and all taxes (excluding HST) except as may be otherwise provided in the RFP Documents, and to furnish all materials, labour, equipment and transportation to perform the entire Work described in the RFP Documents, in the manner prescribed therein, and in accordance with the specifications.

Include a breakdown of costs with this Proposal Form 1.

PRICING FOR CHANGE ORDERS / CHANGE DIRECTIVES:

Please quote overhead and profit percentage based on the following project cost ranges:

Project Costs	Overhead %	Profit %
\$0 up to \$9,999		
\$10,000 up to \$49,999		
\$50,000 up to \$99,999		
\$100,000 up to 149,999		
\$150,000 up to \$200,000		
\$200,000 and higher		

Please note that ONTC reserves the right to not accept the percentage values provided in the table above and any future change order markups will be reviewed and agreed upon by ONTC and contractor.

Please provide the hourly rate of pay for the following (add an additional page for any Positions not listed below):

Position	Hourly Rate
Project Manager	
Estimator	
Scheduler	
Geotechnical	
Civil	
Site Supper	
Carpentry	
Plumbing	
Electrical	

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1 *cont'd*
PROPOSAL SUBMISSION FORM

Position	Hourly Rate
Mechanical	
Masonry/Concrete	
Roofing	
Removal and Disposal of designated substances and remediation of removal sites	

SEPERATELY PRICED ITEMS

Item	Price
Demolition	
Excavation and soil disposal	
Engineering Design	
Concrete Footing	
Supply Sand Tower including Delivery	
Sand Tower Install	
Optional Price: Catwalk	

Please note that hourly rates, schedule of fees and expenses shall also be provided and will be used by ONTC for additional services if needed.

Purchase is subject to budgetary approval of expenditures.

Proposal Forms:

The information contained in the Proposal Forms, as listed in the Request for Proposals and attached hereto, forms an integral part of this Proposal.

Declarations:

We hereby declare that:

- (a) We will execute the Agreement within ten (10) Working Days of receipt of the Final Agreement;
- (b) We agree to perform and fully complete the Work on or before the agreed upon schedule;
- (c) The Work is to start no later than the agreed upon start date in the schedule;
- (d) Work is deemed to be complete when Work is substantially complete as defined in the *Construction Act* and the Contractor is demobilized from the site;

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1 *cont'd*
PROPOSAL SUBMISSION FORM

- (e) The statutory holdback pursuant to the Construction Act will be 10%;
- (f) We will provide the required evidence of insurance, as specified in the Ontario Northland – Supplementary Conditions – CCDC 2-2020 included in Part 5 of the RFP Documents, with our execution of the Agreement;
- (g) For the General Liability Insurance, Ontario Northland Transportation Commission is to be included as an additional insured;
- (h) Coverages and limits of insurances will be provided and maintained by all Subcontractors in accordance with subsection (f) above;
- (i) No person, corporation or other legal entity other than the undersigned has any interest in this Proposal or in the proposed Contract for which this Proposal is made;
- (j) This Proposal is irrevocable for a period of ninety (90) days from the Submission Deadline;
- (l) It is understood and agreed that if this Proposal is accepted, we will not commence the Work until we have executed the Final Agreement and delivered it to ONTC and/or we are advised in writing by ONTC to proceed with the Work;
- (l) All copies of plans and specifications and other said RFP Documents furnished to us for the purpose of this Proposal are the property of ONTC and shall be kept confidential and not divulged in any manner by us. They will not be used on other work by us and will be returned to the issuing office when requested or promptly when not bidding; and
- (m) We have no right to reimbursement by ONTC for expenses, both direct and indirect, which may have been incurred by us in preparing this Proposal or otherwise participating in the RFP Process.
- (l) We have no right to reimbursement by ONTC for expenses, both direct and indirect, which may have been incurred by us in preparing this Proposal or otherwise participating in the RFP Process.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1 *cont'd*
PROPOSAL SUBMISSION FORM**

Signed and submitted for and on behalf of:

Contractor:

(Company Name)

(Street Address or Postal Box Number)

(City, Province and Postal Code)

Signature:

I have authority to bind the corporation.

Name and Title:

Email:

Date at _____ this _____ day of _____, 2024

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 2
RESPONDENT’S GENERAL INFORMATION**

The Respondent must complete this document and submit it as part of his Proposal.

Name <i>Please indicate the complete legal name of the firm</i>	
Tax Registration # (HST)	
Tax Registration # (GST)	
Tax Registration # (QST)	
Address	
Telephone Number	
Fax Number	
Web Address	
Please indicate any other name(s) under which the firm operates <i>(if applicable)</i>	

Owner Partnership Corporation

Relationship *(if applicable)*

Parent Company	
Subsidiaries	
Affiliates	

Ontario Business Yes No

“Ontario Business”: A supplier, manufacturer or distributor of any business structure that conducts its activities on a permanent basis in Ontario. The business either has a headquarters or a main office in Ontario or has at least 250 full-time employees in Ontario at the time of this RFP.

Canadian Business Yes No

“Canadian Business”: A commercial enterprise that is incorporated pursuant to the laws of Canada and which has ongoing business activities in Canada.

Main Contact Person *(for the purposes of this Proposal)*

Name	
Title	
Telephone #	Fax #
E-mail address	

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 2 *cont'd*
RESPONDENT'S GENERAL INFORMATION**

Indicate below your company/business' invoice terms:

Does your company/business have the capability to handle Electronic Funds Transfers?
YES _____ NO _____

If yes, please provide the necessary banking information as part of your submission.

If available, please provide your Dunn & Bradstreet Reference Number:

How many years of experience does your company have in the provision of goods or services proposed herein?

Subcontractors

The Respondent must indicate where they will use subcontractors for specific services.

Description of Services	Subcontractor's Name	% Contract Value	Telephone Number

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 3
ACKNOWLEDGMENT TO COMPLY WITH PART 3 - REQUEST FOR PROPOSALS
SPECIFICATIONS**

Ontario Northland Transportation Commission (ONTC) is committed to procuring goods and services through a process that is conducted in a fair and transparent manner, providing equal opportunity to vendors.

ONTC endeavors to provide specifications that meet the requirements of the procurement without naming specific brands. However, there may be instances where a third-party consultant prepares a specification on behalf of ONTC, and a specific brand is named. In these instances, alternates may be used if deemed equal by ONTC and/or the third-party consultant. Respondents shall submit proposed deemed equals as a clarification item to be considered while the procurement remains open per the requirements of Part 1, Section 3, item 3.2 Questions and Communications Related to the RFP Documents.

Respondent acknowledges that they can fully comply with Part 3 – Request for Proposals Specifications.

(Check one) YES _____; NO _____

If the Respondent indicates “NO”, they shall provide details as an attachment to this Proposal Form 3, indicating how they will deviate from the requirements identified in Part 3 – Requests for Proposals – Specifications.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 4
REFERENCES**

The Respondent must supply here the reference information of three (3) customers for which they have provided similar services within the last five (5) years. ONTC is **NOT** to be listed as a Reference.

Reference #1

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

Reference #2

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

Reference #3

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 5
COMPLIANCE WITH CONTRACT DOCUMENTS**

The Respondent may suggest changes to the Supplementary Conditions and Special Supplementary Conditions included in Part 5 of this RFP using the table below. ONTC does not have any obligation to accept any proposed changes to the Supplementary Conditions and Special Supplementary Conditions and will do so in its sole discretion. Significant material proposed changes to the Supplementary Conditions and Special Supplementary Conditions may impact the evaluation of the Respondent’s proposal. ONTC will not accept any material changes to the clauses in the Supplementary Conditions relating to Confidentiality, Personal Information, Intellectual Property ownership and infringement, Indemnification, Limitation of Liability or rights of ONTC on termination. ONTC, as an Ontario Crown corporation, is unable to provide indemnities pursuant to s.28 of the *Financial Administration Act* (Ontario).

Exception	Contract, Schedule, Article, or Sub-Clause	Existing Wording	Respondent’s Proposed Wording	Reason for Proposed Change
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 6
RESPONDENTS' MEETING REGISTRATION FORM**

Reference Number: RFP 2024 030

Title: New North Bay Locomotive Sand Tower

Submitted To: ONTARIO NORTHLAND TRANSPORTATION COMMISSION

Please confirm that you plan to attend the Respondents' Meeting by emailing a completed copy of this **Registration Form**, to Brinda.ranpura@ontarionorthland.ca, prior to Monday, July 29, 2024, at 4:00 p.m.

Failure to submit this form by the time required may result in ONTC not being able to accommodate your attendance at the meeting. PROPOSALS SUBMITTED BY RESPONDENTS THAT FAILED TO ATTEND THE RESPONDENTS' MEETING WILL BE DECLARED NON-COMPLIANT AND WILL BE REJECTED.

Date of Meeting: Tuesday, July 30, 2024

Time of Meeting: 10:00 a.m.

Location: via Teams meeting

COMPANY NAME: _____

CONTACT NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

NUMBER OF PEOPLE ATTENDING: _____

ACCOMMODATION: ONTARIO NORTHLAND IS AN EQUAL OPPORTUNITY ORGANIZATION. ACCOMMODATION IS AVAILABLE FOR RESPONDENT'S WITH DISABILITIES THROUGHOUT THE PROCUREMENT PROCESS. IF ACCOMMODATION IS REQUIRED, PLEASE CONTACT brinda.ranpura@ontarionorthland.ca.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 7
HEALTH, SAFETY AND ENVIRONMENT**

Respondents shall review the attached Health and Safety Policy Statement and include the following with their Proposal:

1. Submit a copy of the most recent version of your Health, Safety, and Environmental Protection Policy. **Provide evidence of compliance to Ontario's environmental requirements (e.g., recycling, waste management, etc.).**
2. Submit the attached Contractor Health and Safety Responsibility Agreement.
3. Submit the attached Contractor Safety Pre-Qualification Form and associated supporting documents.

Respondents must pass the Contractor Safety Pre-Qualification. Failure to pass will result in disqualification from the procurement process.

DATE FORMALIZED April 2016 REVISED February 2023	Health and Safety Policy
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POLICY STATEMENT

In keeping with our value of *Safety. Full Stop.* Ontario Northland Transportation Commission (ONTC) / Nipissing Central Railway (NCR) is committed to providing a safe and healthy work environment. Safety is core to everything we do. We don't settle for less, for our people or our customers, even when operating pressures make it difficult to do so.

As part of developing a safety culture, we will collectively strive to prevent accidents and incidents through a risk-based approach with the goal to continuously improve. Employees are required to report safety concerns immediately and can do so without fear of reprisal, while management ensures all employees receive quick follow-up.

We will adopt the latest in systems to improve the reporting, investigation, and implementation of corrective actions, close-out, and trend analysis of accidents and incidents. We will communicate safety and encourage engagement at all levels of the organization, such as during tailgates, briefings, and meetings.

The success of ONTC/NCR safety programs will be ensured through the collective and cooperative efforts of all, including management, employees, unions, and Workplace Health and Safety Committees. All ONTC/NCR members will jointly participate in safety, health and loss prevention initiatives to ensure a safe and healthy workplace for all employees.



Chad Evans
President and CEO

CONTRACTOR HEALTH AND SAFETY RESPONSIBILITY AGREEMENT

In submitting this Proposal, I/We, on behalf of, _____

(legal name of company)

certify the following:

- (a) I/We have a health and safety policy and will maintain a program to implement such policy as required by clause 25(2) (j) of the *Occupational Health and Safety Act*, R.S.O. 1990, c.O.1, as amended, (the "OHSA").

The requirements in (a) do not apply to employers with five (5) or less employees.

- (b) With respect to the Services being offered in this Proposal, I/We and our proposed sub-contractor, acknowledge the responsibility to, and shall:

- (i) fulfill all of the obligations under the OHSA and ensure that all work is carried out in accordance with the OHSA and its regulations.
- (ii) ensure that adequate and competent supervision is provided as required under the OHSA to protect the health and safety of workers; and
- (iii) provide information and instruction to all employees to ensure they are informed of the hazards inherent in the work and understand the procedures for minimizing the risk of injury or illness.

- (c) I/We agree to take precautions reasonable in the circumstances for the protection of worker health and safety, as required under the OHSA.

Dated at _____ this _____ day of _____, 202__

An Authorized Signing Officer _____

(Key Contact)

(Title) _____

(Telephone Number) _____

(Firm's Name) _____

(Firm's Address) _____

1. Company Identification:

Company Name: _____ Mailing Address: _____ _____ _____	Telephone: _____ Fax: _____ E-mail: _____	ONTC Use _____ _____ _____ _____
---	---	--

2. Form of Business:

Sole Proprietor
 Partnership:
 Corporation

3. Officers:	Years with the Company	
President / CEO _____		
Vice President _____		
Treasurer _____		
Who is the manager most responsible for health and safety?		
Name: _____	Title: _____	

4. How many years has your business operated under its current name? _____	
5. Under Current Management Since (Date) _____	

6. Parent Company Information

Parent Name: _____	
City: _____ Province / State: _____ Postal / Zip Code: _____	
Subsidiaries: _____	

7. Insurance Contact Information

Title: _____	Telephone: _____	Fax: _____
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8. Insurance Carriers:
Type of Coverage: Telephone

_____	_____	_____
_____	_____	_____
_____	_____	_____

9. Organization:

Describe the nature of the work your company specialized in:

<input type="checkbox"/> _____	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	

Contractor Safety Pre-Qualification Form

i) Powered Industrial Vehicles (forklifts, cranes, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
j) Heavy Construction Equipment (excavators, backhoes, bulldozers, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
k) Excavation and Trenching	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
l) Housekeeping	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
m) Accident / Incident Reporting and Investigation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
n) Hazard / Unsafe Condition Identification, Reporting and Communication	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
o) Workplace Hazardous Materials information System (WHMIS)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
p) Emergency Action Plan / Evacuation Plan	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
q) Spill Response / Reporting	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
r) Respiratory Protection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
s) Designated Substances Management	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
t) Waste Staging / Disposal	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
u) Traffic Control	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
v) Hearing Conservation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
13. Do you have a policy/procedure for terminating contracts of subcontractors who do not comply with the requirements of the <u>Occupational Health & Safety Act</u> , associated regulations and / or company safety rules?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
14. Do your employees read, write and understand English to the degree that they can safely perform their tasks without the aid of an interpreter? (<i>If no, provide a description of your plan to assure that they can safety perform their tasks</i>)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
15. Do you have personnel certified in Emergency First Aid and CPR on site? If yes, provide copies of certificates of training for site personnel proposed for the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
16. Do you have First Aid kits available to your staff?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
17. Does your company use a formalized Health and Safety Plan for conducting large projects?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
18. Does the company conduct pre-placement medical examinations?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
19. Is task-adequate PPE provided to workers?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
20. Are employees trained in PPE care, use and maintenance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
21. Do you have a corrective actions process for addressing individual health and safety performance deficiencies	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>

22. Equipment and Manuals:

- | | | | |
|---|------------------------------|-----------------------------|--|
| a. Do you conduct inspections on operating equipment (e.g. excavators, cranes, forklifts, vehicles, etc.) as per regulatory requirements? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b. Do you maintain operating equipment in compliance with regulatory requirements? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c. Do you maintain applicable pre-use inspection and maintenance certification records for operating equipment? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| d. Are records available upon request | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

23. Subcontractors

- | | | | |
|--|-------------------------------|--|--|
| a. Do you use health and safety performance criteria in the selection of contractors? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b. Do you require your subcontractor to have a written health and safety program? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c. Are your subcontractors included in: | health and safety orientation | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | health and safety meetings | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | workplace inspections | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | health and safety audits | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| d. Does the company have a policy for the termination of contracts of subcontractors who do not comply with the Occupation Health and Safety Act, regulations under the Act, contractor rules, programs, protocols policies or procedures? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| e. Does the company have a progressive discipline policy for employees and subcontractors? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

24. Health and Safety Training

- | | | | |
|---|------------------------------|-----------------------------|--|
| a. Are you aware for the regulatory training requirements for your employees? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b. Have your employees received the required health and safety training? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c. Do you have specific health and safety training for supervisors? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| d. Do you keep records of health and safety training for employees? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| e. Are records of health and safety training available on request? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

25. Job Skills

- | | | | |
|---|------------------------------|-----------------------------|--|
| a. Have employees been trained in appropriate job skills? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b. Are employee job skills certified where required by regulation or industry standard? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c. Are certificates available upon request? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

26. Health and Safety Supervision

- | | | | |
|---|------------------------------|-----------------------------|--|
| a. Does the company have a health & safety coordinator? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b. Who is the highest ranking safety professional in the company? | | | |

I agree that the above information is true and correct to the best of my knowledge. I also agree to follow all terms and conditions of the Contractor Safety Program at all times while performing work for ONTC. I understand that supporting documentation may be requested for due diligence verification purposes.

Name: (Please print) _____
 Signature: _____

Title: _____
 Date: _____

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 8
SCHEDULE OF MATERIALS**

SCHEDULE OF MATERIALS - VARIATIONS (AND SOURCES)

VARIATIONS:

MATERIALS SOURCES:
(ADD WHERE REQUIRED)

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 9
LIST OF EQUIPMENT**

List all Equipment, owned or controlled by the Respondent for use on the Work. Such list shall show for each Unit the description of the Unit, capacity, condition, age, present location, the owner's name and all-inclusive hourly rental rates. Such equipment shall be subject to inspection by ONTC to verify the stated information.

ONTC reserves the right to perform random site inspections in order to ensure the Successful Respondent's equipment used to perform the Work coincides with the information provided below. Any deviations may be subject to the terms of the Final Agreement. Any changes to this proposed list of equipment requires prior approval of ONTC.

<u>Quantity</u>	<u>Description</u>	<u>Capacity</u>	<u>Condition</u>	<u>Age</u>	<u>Location</u>	<u>Owner</u>	<u>Hourly Rental Rate</u>
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**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 10
SCHEDULE AND PROPOSED APPROACH**

CONSTRUCTION SCHEDULE

Respondents shall include a construction schedule with their Proposal. The construction schedule shall be in Gantt chart format, showing all activities of the Work and the critical path. The construction schedule shall reflect the milestone dates listed below.

Request for Proposal Close	Friday, August 16, 2024
Drawings	Within three (3) weeks of contract being signed
Demo and Footing	October 04, 2024
Sand Tower Installation	November 29, 2024
Commissioning and Testing	December 31, 2024

Do you agree to complete the Work by December 31, 2024?

Respondent confirms that they will complete the Work by December 31, 2024.

(Check one) YES _____; NO _____

ONTC has established the date for Completion of the Work with consideration for Northern Ontario weather conditions and strict project timelines. As such, and subject to ONTC's sole discretion, a failure to confirm that the work will be completed by the identified date may result in disqualification of the Proposal.

PROPOSED APPROACH

The Respondent shall provide a written narrative plan on their proposed approach for the project, demonstrating their ability to complete the project on budget and on schedule within the timelines identified. Evidence of a thorough review of the RFP Documents and consideration for scheduling above grade work prior to the winter season should be apparent in the Respondent's Schedule and Proposed Approach.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 11
LIST OF PERSONNEL**

List the names of the Principal Personnel who will be assigned to the Work and **include their resumes.** This information shall be for the use of ONTC in assessing the Proposal. In the event of a Subcontractor(s) being listed as Principal Personnel, the Respondent shall also include their resume(s).

Name

Position

Experience

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 12
CONTRACTOR’S PREQUALIFICATION STATEMENT**

1. The Respondent shall include a company profile.

In the event that the Respondent is using a subcontractor(s) for a portion(s) of the scope of work associated with this RFP, they shall also include with this Proposal Form 12, a company profile for each subcontractor.

2. The Respondent shall supply a minimum of three (3) project descriptions for projects of a similar nature and scope. The project descriptions shall include:
 - a) Company/Client
 - b) Name of contact and contact details
 - c) Project Name
 - d) The scheduled project start and end date
 - e) The actual start and end date
 - f) The project value of the Respondent’s scope of work for the project at the beginning of the project
 - g) The project value of the Respondent’s scope of work for the project at the end of the project
 - h) Detailed description of the Respondent’s scope of work for the project. The description should detail if subcontractors were used to complete part of the scope.
 - i) Outcomes of the project (i.e., completed on schedule and on budget etc.)

ONTC may, in its sole discretion, confirm the Respondent’s experience in the projects identified by contacting the named contacts above, in addition to the references provided as part of Proposal Form 4.

3. Provide team structure and resume of the key personnel that will be assigned to this project. The key resource team shall include a Senior Project Manager. The key personnel must be made available for the full term of the Contract. A succession plan must be established by the CPM to ensure optimal management of the project in the event of temporary or permanent absence of the Senior Project Manager, without jeopardizing project activities.
4. The Respondent shall describe their experience with the climatic and environmental requirements in Northern Ontario.
5. The Respondent shall describe how and when you will use local workforce, local vendors, local manufacturers, local contractors, and local apprentices/trainees to achieve the project goals and provide the requested services, with emphasis on the local benefit to ONTC’s areas of operation.
6. The Respondent shall describe their organization’s diversity programs.

ONTC shall be provided free access to any licensed software the CPM intends to use for the delivery of the required services.

ONTC will consider all information submitted in the Respondent’s Proposal when evaluating the Respondent’s experience.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 13
CLAIMS**

Submit an up to date list of outstanding, pending or anticipated claims, proceedings, liens or other legal claims, actions or proceedings.



PART 5

REQUEST FOR PROPOSALS

CCDC 2 – 2020

**SUPPLEMENTARY AND SPECIAL
SUPPLEMENTARY CONDITIONS**

CCDC 2

Stipulated Price Contract

2 0 2 0

Name of Project

Apply a CCDC 2 copyright seal here. The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 2 – 2020 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

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CCDC 2 STIPULATED PRICE CONTRACT

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when a stipulated price is the basis of payment.

This Agreement made on _____ day of _____ in the year _____.
by and between the parties

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The *Owner* and the *Contractor* agree as follows:

ARTICLE A-1 THE WORK

The *Contractor* shall:

1.1 perform the *Work* required by the *Contract Documents* for *(insert below the description or title of the Work)*

located at *(insert below the Place of the Work)*

for which the Agreement has been signed by the parties, and for which *(insert below the name of the Consultant)*

is acting as and is hereinafter called the "*Consultant*" and

1.2 do and fulfill everything indicated by the *Contract Documents*, and

1.3 commence the *Work* by the _____ day of _____ in the year _____ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the _____ day of _____ in the year _____.

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bid documents that are not expressly listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS.

2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement – THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- General Conditions

*

** (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; Division 01 of the Specifications – GENERAL REQUIREMENTS; Project information that the Contractor may rely upon; technical Specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; Drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date; time schedule)*

ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

/100 dollars \$

4.2 *Value Added Taxes* (of _____ %) payable by the *Owner* to the *Contractor* are:

/100 dollars \$

4.3 Total amount payable by the *Owner* to the *Contractor* for the *Work* is:

/100 dollars \$

4.4 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.5 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents* and *Payment Legislation*, and in accordance with legislation and statutory regulations respecting holdback percentages, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* unless otherwise prescribed by *Payment Legislation* together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by adjudication, arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:
 - (1) 2% per annum above the prime rate for the first 60 days.
 - (2) 4% per annum above the prime rate after the first 60 days.
 Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by *(Insert name of chartered lending institution whose prime rate is to be used)*

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.2.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below.

6.2 The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.

6.3 A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it will be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* will be deemed to have been received on the *Working Day* next following such day.

6.4 A *Notice in Writing* sent by any form of electronic communication will be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof.

6.5 An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

*name of Owner**

address

email address

Contractor

*name of Contractor**

address

email address

Consultant

*name of Consultant**

address

email address

** If it is intended that a specific individual must receive the notice, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / French # language shall prevail.
Complete this statement by striking out inapplicable term.
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

- 8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED
in the presence of:

WITNESS

OWNER

name of Owner

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

- N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:*
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or*
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.*

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the amount stipulated in Article A-4 of the Agreement – CONTRACT PRICE.

Contract Time

The *Contract Time* is the time from commencement of the *Work* to the date of *Ready-for-Takeover* as stipulated in paragraph 1.3 of Article A-1 of the Agreement – THE WORK .

Contractor

The *Contractor* is the person or entity identified as such in the Agreement.

Drawings

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement.

Other Contractor

Other Contractor means a contractor, other than the *Contractor* or a *Subcontractor*, engaged by the *Owner* for the *Project*.

Payment Legislation

Payment Legislation means such legislation in effect at the *Place of the Work* which governs payment under construction contracts.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or Products means material, machinery, equipment, and fixtures forming part of the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Ready-for-Takeover

Ready-for-Takeover shall have been attained when the conditions set out in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER have been met, as verified by the *Consultant* pursuant to paragraph 12.1.4.2 of GC 12.1 – READY-FOR-TAKEOVER.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models, or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 The *Contract Documents* are complementary, and what is required by one shall be as binding as if required by all. Performance by the *Contractor* shall be required only to the extent consistent with the *Contract Documents*.
- 1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating co-ordination and execution of the *Work* by the *Contractor*.
- 1.1.4 The *Contractor* is not responsible for errors, omissions or inconsistencies in the *Contract Documents*. If there are perceived errors, omissions or inconsistencies discovered by or made known to the *Contractor*, the *Contractor* shall promptly report to the *Consultant* and shall not proceed with the work affected until the *Contractor* has received corrected or additional information from the *Consultant*.
- 1.1.5 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between *Owner* and *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 01 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 amended or later dated documents shall govern over earlier documents of the same type.
 - .5 noted materials and annotations shall govern over graphic indications.
- 1.1.6 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.7 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.8 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.9 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.10 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.11 Physical models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, the *Consultant* or the *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Consultant* and the *Contractor*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement – PAYMENT, GC 5.3 – PAYMENT and GC 5.5 – FINAL PAYMENT.
- 2.2.5 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to perform the *Work* in accordance with the *Contract Documents*.
- 2.2.6 Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.7 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.8 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.9 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.10 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.11 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.
- 2.2.12 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.13 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other submittals by the *Contractor*, in accordance with the *Contract Documents*.

- 2.2.14 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 2.2.15 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* and verify that *Ready-for-Takeover* has been attained.
- 2.2.16 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.17 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.
- 2.2.18 If the *Consultant's* engagement is terminated, the *Owner* shall immediately engage a *Consultant* against whom the *Contractor* makes no reasonable objection and whose duties and responsibilities under the *Contract Documents* will be that of the former *Consultant*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is required by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by others if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work was incorporated in the *Work* or the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly *Other Contractors' work* destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a finding.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.

3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY THE OWNER OR OTHER CONTRACTORS

3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to *Other Contractors* and to perform work with own forces.

3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:

- .1 provide for the co-ordination of the activities and work of *Other Contractors* and the *Owner's* own forces with the *Work* of the *Contract*;
- .2 enter into separate contracts with *Other Contractors* under conditions of contract which are compatible with the conditions of the *Contract*;
- .3 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 – INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
- .4 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of *Other Contractors* or the *Owner's* own forces.

3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:

- .1 afford the *Owner* and *Other Contractors* reasonable opportunity to store their products and execute their work;
- .2 co-ordinate and schedule the *Work* with the work of *Other Contractors* or the *Owner's* own forces that are identified in the *Contract Documents*;
- .3 participate with *Other Contractors* and the *Owner* in reviewing their construction schedules when directed to do so; and
- .4 report promptly to the *Consultant* in writing any apparent deficiencies in the work of *Other Contractors* or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.

3.2.4 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of *Other Contractors* or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

3.2.5 Disputes and other matters in question between the *Contractor* and *Other Contractors* shall be dealt with as provided in Part 8 of the General Conditions – DISPUTE RESOLUTION provided the *Other Contractors* have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any *Other Contractor* whose contract with the *Owner* contains a similar agreement to arbitrate. In the absence of *Other Contractors* having reciprocal obligations, disputes and other matters in question initiated by the *Contractor* against *Other Contractors* will be considered disputes and other matters in question between the *Contractor* and the *Owner*.

3.2.6 Should the *Owner*, the *Consultant*, *Other Contractors*, or anyone employed by them directly or indirectly be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 3.3 TEMPORARY WORK

3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work* unless otherwise specified in the *Contract Documents*.

3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

3.3.3 Notwithstanding the provisions of GC 3.1 – CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 CONSTRUCTION SCHEDULE

3.4.1 The *Contractor* shall:

- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
- .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
- .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions – CHANGES IN THE WORK.

GC 3.5 SUPERVISION

3.5.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while the *Work* is being performed. The appointed representative shall not be changed except for valid reason.

3.5.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

3.6.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:

- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
- .2 incorporate the applicable terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
- .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.

3.6.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.

3.6.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.

3.6.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the difference occasioned by such required change.

3.6.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.

3.6.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

GC 3.7 LABOUR AND PRODUCTS

3.7.1 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and employ only workers that are skilled in the tasks assigned.

3.7.2 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

3.7.3 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

GC 3.8 SHOP DRAWINGS

3.8.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.

3.8.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in accordance with an agreed schedule, or in the absence of an agreed schedule, in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of *Other Contractors* or the *Owner's* own forces.

- 3.8.3 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.8.4 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.8.5 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.8.6 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.8.7 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of the *Work* or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.
- 4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.
- 4.1.6 The value of the *Work* performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement – PAYMENT shall be submitted monthly to the *Owner* and the *Consultant* simultaneously as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 The amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed and *Products* delivered to the *Place of the Work* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values shall be made out in such form as specified in the *Contract* and supported by such evidence as the *Consultant* may reasonably require.
- 5.2.6 Applications for payment shall be based on the schedule of values accepted by the *Consultant* and shall comply with the provisions of *Payment Legislation*.
- 5.2.7 Each application for payment shall include evidence of compliance with workers' compensation legislation at the *Place of the Work* and after the first payment, a declaration by the *Contractor* as to the distribution made of the amounts previously received using document CCDC 9A 'Statutory Declaration'.
- 5.2.8 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PAYMENT

- 5.3.1 After receipt by the *Consultant* and the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:
 - .1 The *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* certifies a different amount, or rejects the application or part thereof, the *Owner* shall promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
 - .2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment, and in any event, in compliance with *Payment Legislation*.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 The *Consultant* will review the *Work* to certify or verify the validity of the application for *Substantial Performance of the Work* and will promptly, and in any event, no later than 20 calendar days after receipt of the *Contractors* application:
 - .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.2 Where the holdback amount required by the applicable lien legislation has not been placed in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.4.3 Subject to the requirements of any *Payment Legislation*, all holdback amount prescribed by the applicable lien legislation for the *Work* shall become due and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.4.4 The *Contractor* shall submit an application for payment of the lien holdback amount in accordance with GC 5.3 – PAYMENT.
- 5.4.5 Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release, such portion to the *Contractor* in accordance with such legislation.

5.4.6 Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

5.5.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.

5.5.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and when the *Consultant* finds the *Contractor*'s application for final payment valid, the *Consultant* will promptly issue a final certificate for payment to the *Owner*, with a copy to the *Contractor*.

5.5.3 If the *Consultant* rejects the application or part thereof, the *Owner* will promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.

5.5.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with *Payment Legislation*.

GC 5.6 DEFERRED WORK

5.6.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, or if the *Owner* and the *Contractor* agree that, there are items of work that must be deferred, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such deferred *Work*.

GC 5.7 NON-CONFORMING WORK

5.7.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:

- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
- .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.

6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present to the *Consultant*, in a form that can be reasonably evaluated, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.

6.2.2 When the *Owner* and the *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the applications for progress payment.

GC 6.3 CHANGE DIRECTIVE

6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.

6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.

6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.

- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor*'s actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- 1 If the change results in a net increase in the *Contractor*'s cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor*'s cost, plus the *Contractor*'s percentage fee on such net increase.
 - 2 If the change results in a net decrease in the *Contractor*'s cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor*'s cost, without adjustment for the *Contractor*'s percentage fee.
 - 3 The *Contractor*'s fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following in as much as it contributes directly to the implementation of the *Change Directive*:

Labour

- 1 rates that are listed in the schedule or as agreed by the *Owner* and the *Contractor* including wages, benefits, compensation, contributions, assessments, or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan for:
 - (1) trade labour in the direct employ of the *Contractor*;
 - (2) the *Contractor*'s personnel when stationed at the field office;
 - (3) the *Contractor*'s personnel engaged at shops or on the road, in expediting the production or transportation of materials or equipment; and
 - (4) the *Contractor*'s office personnel engaged in a technical capacity, or other personnel identified in Article A-3 of the Agreement – CONTRACT DOCUMENTS for the time spent in the performance of the *Work*;

Products, Construction Equipment and Temporary Work

- 2 cost of all *Products* including cost of transportation thereof;
- 3 in the absence of agreed rates, cost less salvage value of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000 owned by the *Contractor*;
- 4 rental cost of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000;
- 5 cost of all equipment and services required for the *Contractor*'s field office;

Subcontract

- 6 subcontract amounts of Subcontractor with pricing mechanism approved by the *Owner*;

Others

- 7 travel and subsistence expenses of the *Contractor*'s personnel described in paragraph 6.3.7.1;
- 8 deposits lost provided that they are not caused by negligent acts or omissions of the *Contractor*;
- 9 cost of quality assurance such as independent inspection and testing services;
- 10 charges levied by authorities having jurisdiction at the *Place of the Work*;
- 11 royalties, patent license fees, and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor*'s obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 – PATENT FEES;
- 12 premium for all contract securities and insurance for which the *Contractor* is required, by the *Contract Documents*, to provide, maintain and pay in relation to the performance of the *Work*;
- 13 losses and expenses sustained by the *Contractor* for matters which are the subject of insurance under the policies prescribed in GC 11.1 – INSURANCE when such losses and expenses are not recoverable because the amounts are in excess of collectible amounts or within the deductible amounts;
- 14 taxes and duties, other than *Value Added Taxes*, income, capital, or property taxes, relating to the *Work* for which the *Contractor* is liable;
- 15 charges for voice and data communications, courier services, expressage, transmittal and reproduction of documents, and petty cash items;
- 16 cost for removal and disposal of waste products and debris;
- 17 legal costs, incurred by the *Contractor*, in relation to the performance of the *Work* provided that they are not:
 - (1) relating to a dispute between the *Owner* and the *Contractor* unless such costs are part of a settlement or awarded by arbitration or court,
 - (2) the result of the negligent acts or omissions of the *Contractor*, or
 - (3) the result of a breach of this *Contract* by the *Contractor*;
- 18 cost of auditing when requested by the *Owner*; and
- 19 cost of *Project* specific information technology in accordance with the method determined by the parties.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* performance of the *Work* attributable to the *Change Directive* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for a finding.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* and differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will promptly inform the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, GC 9.3 – ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by the *Owner*, the *Consultant*, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, resulting in the failure of the *Contractor* to attain *Ready-for-Takeover* by the date stipulated in Article A-1 of the Agreement – THE WORK, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or

- 4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, the *Consultant* or anyone employed or engaged by them directly or indirectly.
- 6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.12 of GC 2.2 – ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

- 6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.
- 6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:
- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
 - .2 keep such records as may be necessary to support the claim.
- 6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based and the *Consultant* will make a finding upon such claim.
- 6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to perform the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* which provides the detail of such neglect to perform the *Work* properly or such failure to comply with the requirements of the *Contract* to a substantial degree, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing*, containing particulars of the default including references to applicable provisions of the *Contract*, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.
- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time,
 - .2 provides the *Owner* with an acceptable schedule for such correction, and
 - .3 corrects the default in accordance with the *Contract* terms and with such schedule.

- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may by giving *Notice in Writing*:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* for the *Work* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor*'s right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor*'s right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense,
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued,
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant*'s additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 – WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor*'s work under GC 12.3 – WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor*'s obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue in force after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner*'s insolvency, or if a receiver is appointed because of the *Owner*'s insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner*'s contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner*'s obligations under the *Contract*,
 - .2 the *Consultant* fails to issue a certificate as provided in Part 5 of the General Conditions – PAYMENT,
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by adjudication, arbitration or court, or
 - .4 the *Owner* fails to comply with the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, gives a written statement to the *Owner* and the *Contractor* that provides detail of such failure to comply with the requirements of the *Contract* to a substantial degree.
- 7.2.4 The *Contractor*'s *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* by giving a *Notice in Writing* to the *Owner* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved

in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION.

- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.3.3 to 8.3.8 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.4 – RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 ADJUDICATION

- 8.2.1 Nothing in this *Contract* shall be deemed to affect the rights of the parties to resolve any dispute by adjudication as may be prescribed by applicable legislation.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.3.1 In accordance with the rules for mediation as provided in CCDC 40 ‘Rules for Mediation and Arbitration of Construction Industry Disputes’ in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.3.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 – ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.3.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid, and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.3.4 After a period of 10 *Working Days* following receipt of a responding party’s *Notice in Writing* of reply under paragraph 8.3.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the rules for mediation as provided in CCDC 40 in effect at the time of bid closing.
- 8.3.5 If the dispute has not been resolved at the mediation or within such further period as is agreed by the parties, the Project Mediator will terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.3.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.3.5, either party may refer the dispute to be finally resolved by arbitration under the rules of arbitration as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.3.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.3.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.3.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.
- 8.3.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.3.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.3.6 shall be:
- .1 held in abeyance until:
 - (1) *Ready-for-Takeover*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and

.2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.3.6.

GC 8.4 RETENTION OF RIGHTS

- 8.4.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions – DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.4.2 Nothing in Part 8 of the General Conditions – DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.3.6 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work*, the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors or omissions in the *Contract Documents*; or
 - .2 acts or omissions by the *Owner*, the *Consultant*, *Other Contractors*, or their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or the *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substance exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless any toxic or hazardous substance which was present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substance exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.

- 9.2.6 If the *Owner* and the *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.8 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 The *Contractor* shall be responsible for establishing, initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the *Work* in accordance with the applicable health and safety legislation.
- 9.4.2 The *Owner* and the *Contractor* shall comply with all health and safety precautions and programs established at the *Place of the Work*.
- 9.4.3 The *Owner* and the *Contractor* shall comply with the rules, regulations and practices required by the applicable health and safety legislation.
- 9.4.4 The *Owner* shall cause the *Consultant*, *Other Contractors* and the *Owner's* own forces to comply with all health and safety precautions and programs established by the *Contractor* at the *Place of the Work*.
- 9.4.5 Nothing in this *Contract* shall affect the determination of liability under the applicable health and safety legislation.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or the *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing,
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and

- 3 if the *Owner* and the *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.5.2 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor*'s operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 make good any damage to the *Work*, the *Owner*'s property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.3 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 – MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will issue the changes required to the *Contract Documents* as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the physical model, plan or design of which was supplied to the *Contractor* as part of the *Contract*.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, and again with the *Contractor*'s applications for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*.

PART 11 INSURANCE

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 13.1 – INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the requirements of which are specified in CCDC 41 'CCDC Insurance Requirements' in effect at the time of bid closing except as hereinafter provided:
1. General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover* on an ongoing basis for a period of 6 years following *Ready-for-Takeover*.
 2. Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
 3. Unmanned aerial vehicle aircraft, manned aircraft or watercraft Liability Insurance when owned or non-owned manned or unmanned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 4. "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Ready-for-Takeover*;
 - (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*; and
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
 5. Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Ready-for-Takeover*.
 6. The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except

that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or *Other Contractors*, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by the *Owner* or *Other Contractors*, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

- .7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
- .8 *Contractors' Pollution Liability Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.

11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.

11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.

11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

11.1.6 If a revised version of CCDC 41 is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.

11.1.7 If a revised version of CCDC 41 is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.

11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41.

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

12.1.1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are limited to the following:

- .1 The *Consultant* has certified or verified the *Substantial Performance of the Work*.
- .2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having jurisdiction.
- .3 Final cleaning and waste removal at the time of applying for *Ready-for-Takeover*, as required by the *Contract Documents*.
- .4 The delivery to the *Owner* of such operations and maintenance documents reasonably necessary for immediate operation and maintenance, as required by the *Contract Documents*.
- .5 Make available a copy of the as-built drawings completed to date on site.
- .6 Startup, testing required for immediate occupancy, as required by the *Contract Documents*.
- .7 Ability to secure access to the *Work* has been provided to the *Owner*, if required by the *Contract Documents*.
- .8 Demonstration and training, as required by the *Contract Documents*, is scheduled by the *Contractor* acting reasonably.

12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 must be deferred because of conditions reasonably beyond the control of the *Contractor*, or by agreement between the *Owner* and the *Contractor* to do so, *Ready-for-Takeover* shall not be delayed.

12.1.3 When the *Contractor* considers that the *Work* is *Ready-for-Takeover*, the *Contractor* shall deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for *Ready-for-Takeover* for review. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.

12.1.4 The *Consultant* will review the *Work* to verify the validity of the application and will promptly, and in any event, no later than 10 calendar days after receipt of the *Contractor's* list and application:

- .1 advise the *Contractor* in writing that the *Work* is not *Ready-for-Takeover* and give reasons why, or
- .2 confirm the date of *Ready-for-Takeover* in writing to each of the *Owner* and the *Contractor*.

12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

12.1.6 The provision of GC 12.1 – READY-FOR-TAKEOVER shall be subject to GC 12.2 – EARLY OCCUPANCY BY THE OWNER.

GC 12.2 EARLY OCCUPANCY BY THE OWNER

12.2.1 The *Owner* may take occupancy of a part or the entirety of the *Work* before *Ready-for-Takeover* has been attained only as agreed by the *Contractor* which agreement shall not be unreasonably withheld.

12.2.2 The *Owner* shall not occupy a part or the entirety of the *Work* without prior approval by authorities having jurisdiction.

12.2.3 If the *Owner* takes occupancy of a part of the *Work* before *Ready-for-Takeover* has been attained:

- .1 The part of the *Work* which is occupied shall be deemed to have been taken over by the *Owner* as from the date on which it is occupied.
- .2 The *Contractor* shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the *Owner*.
- .3 The warranty period specified in paragraph 12.3.1 of GC 12.3 – WARRANTY for that part of the *Work* shall start from the date on which it is occupied.

12.2.4 If the *Owner* takes occupancy of the entirety of the *Work* before all the prerequisites are met as described in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER, the *Work* shall, subject to the requirements of the applicable lien legislation, be deemed to achieve *Ready-for-Takeover*. This shall not relieve the *Contractor*'s responsibility to complete the *Work* in a timely manner.

GC 12.3 WARRANTY

12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date when *Ready-for-Takeover* has been attained.

12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.

12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.

12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor*'s expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.

12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.

12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor*'s responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

13.1.1 Without restricting the parties' obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in paragraphs 13.1.4 and 13.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose negligent acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

- 13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:
- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the minimum liability insurance limit for one occurrence, of the applicable insurance policy, as referred to in CCDC 41 in effect at the time of bid closing.
 - .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
 - .3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss and damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.
 - .4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.
- 13.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 13.1.1 and 13.1.2 shall be inclusive of interest and all legal costs.
- 13.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.
- 13.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:
- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
 - .2 arising out of the *Contractor*'s performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 13.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:
- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based become known; and
 - .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 13.2 WAIVER OF CLAIMS

- 13.2.1 Subject to any lien legislation applicable to the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than 5 calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work* or 20 calendar days following the *Ready-for-Takeover* date, whichever is later;
 - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances, patent fees and defect in title matters for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 13.1.4 or 13.1.5 of GC 13.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.2 The *Contractor* waives and releases the *Owner* from all claims resulting from acts or omissions which occurred after the *Ready-for-Takeover* date except for:
- .1 indemnification respecting third party claims, and claims respecting toxic and hazardous substances, patent fees and defect in title matters, all as referred in paragraphs 13.2.1.2 and 13.2.1.3; and
 - .2 claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.3 Subject to any lien legislation applicable to the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than 20 calendar days following the *Ready-for-Takeover* date;

- .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 13.1.4 of GC 13.1 – INDEMNIFICATION;
 - .4 damages arising from the *Contractor*'s actions which result in substantial defects or deficiencies in the *Work*. “Substantial defects or deficiencies” mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 – WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.4 Respecting claims arising upon substantial defects and deficiencies in the *Work*, as referenced in paragraph 13.2.3.4, and notwithstanding paragraph 13.2.3.5, the *Owner* waives and releases the *Contractor* from all claims except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the *Ready-for-Takeover* date, provided that any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, the time within which any such claim may be brought shall be such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- 13.2.5 The *Owner* waives and releases the *Contractor* from all claims arising from acts or omissions which occur after the *Ready-for-Takeover* date, except for:
- .1 indemnification for claims advanced against the *Owner* by third parties, as referenced in paragraph 13.2.3.2;
 - .2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor*, as referenced in paragraph 13.2.3.3;
 - .3 claims arising under GC 12.3 – WARRANTY; and
 - .4 claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.6 “*Notice in Writing* of claim” as provided for in GC 13.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 13.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of an intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 13.2.7 A claim for lien asserted under the lien legislation prevailing at the *Place of the Work* shall qualify as notice of claim for the purposes of this *Contract*.
- 13.2.8 The party giving the *Notice in Writing* of claim as provided for in GC 13.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 13.2.9 Where the event or series of events giving rise to a claim made under paragraphs 13.2.1 or 13.2.3 has a continuing effect, the detailed account submitted under paragraph 13.2.8 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which such claim is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 13.2.10 Nothing in GC 13.2 – WAIVER OF CLAIMS shall be deemed to affect the rights of the parties under any lien legislation or limitations legislation prevailing at the *Place of the Work*.

AMENDMENTS TO THE AGREEMENT BETWEEN OWNER AND CONTRACTOR

1. ARTICLE A-1 THE WORK

1.1 In paragraph 1.1, delete the words “and for which” and “is acting as and hereinafter called the “*Consultant*””.

1.2 Delete paragraph 1.3 in its entirety and replace it with the following:

“3.1 commence the *Work* by the [] day of [] in the year 20[] and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Substantial Performance of the Work* by the [] day of [] in the year 20[], and attain *Ready-for-Takeover* by the [] day of [] in the year 20[].”

2. ARTICLE A-4 CONTRACT PRICE

2.1 Delete paragraph 4.4 and replace it with the following:

“The *Contract Price* shall remain fixed for the duration of the *Contract Time*, subject only to adjustments as provided for in the *Contract Documents*. For certainty, the *Contractor* assumes all risks in connection with cost increases for *Products*, labour, and *Construction Equipment* prescribed by the *Contract Documents* for the performance of the *Work*, and the *Contractor* assumes all responsibility for liabilities and additional costs that may arise as a result of the *Contractor’s* inclusion of any *Product, Construction Equipment, Supplier, or Subcontractor* in its calculation of the *Contract Price*.”

3. ARTICLE A-5 PAYMENT

3.1 Delete paragraph 5.1 in its entirety, including all subparagraphs thereunder and replace it with the following:

“5.1 Subject to the provisions of the *Contract Documents* and the *Construction Act*, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, as jointly certified by the *Owner* and the *Contractor*, and upon the expiry of the holdback period that follows the publication of the certificate of *Substantial Performance of the Work*, as stipulated in the *Construction Act*, there being no claims for lien registered against the title to the *Place of the Work* and no written notices of lien delivered to the *Owner*, pay the *Contractor* the unpaid balance of the holdback, together with such *Value Added Taxes* as may be applicable to such payment, less any amount stated in any Notice of Non-Payment that is published by the *Owner* in accordance with the *Construction Act*, and
- .3 after *Ready-for-Takeover* has been achieved in accordance with the *Contract Documents* and the *Work* is complete, there being no claims for lien registered against the title to the *Place of the Work* and no written notices of lien delivered to the *Owner*, pay the *Contractor* the unpaid balance of the *Contract Price* in accordance with GC 5.5. – FINAL PAYMENT, together with such *Value Added Taxes* as may be applicable to such payment.”

3.2 Delete paragraph 5.2, including all subparagraphs thereunder in its entirety and replace it with the following:

“5.2 Interest on late payments, if any, will be in accordance with the *Construction Act*.”

4. ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

4.1 Delete the text of ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING (retaining the provisions setting out the addresses of the Owner, Contractor and Consultant) and replace it with the following:

“6.1 *Notices in Writing* between the parties or between them shall be considered to have been received by the addressee on the date of receipt if delivered by hand or by commercial courier during normal business hours or if sent during normal business hours by e-mail during the transmission of which no indication of failure of receipt is communicated to the sender, and addressed as set out below. Such *Notices in Writing*

will be deemed to be received by the addressee on the next *Working Day* if sent by e-mail after normal business hours or if sent by overnight commercial courier. Such *Notices in Writing* will be deemed to be received by the addressee on the fifth *Working Day* following the date of mailing, if sent by pre-paid registered post, when addressed as set out below. An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this article.”

5. ARTICLE A-9 CONFLICT OF INTEREST

5.1 Add new Article A-9 as follows:

“ARTICLE A-9 CONFLICT OF INTEREST

- 9.1 The *Contractor*, all of the *Subcontractors*, and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a Conflict of Interest (actually or potentially, in the sole opinion of the *Owner*) with the provision of the *Work* pursuant to the *Contract*.
- 9.2 The *Contractor* shall disclose to the *Owner*, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a Conflict of Interest or a potential Conflict of Interest, including the retention of any *Subcontractor* or *Supplier* that is directly or indirectly affiliated with or related to the *Contractor*.”

6. ARTICLE A-10 TIME OF THE ESSENCE / LIQUIDATED DAMAGES

6.1 Add new Article A-10 as follows:

“ARTICLE A-10 TIME OF THE ESSENCE/LIQUIDATED DAMAGES as follows:

- 10.1 It is agreed that one of the reasons the *Contractor* was selected by the *Owner* for this *Contract* is the *Contractor*'s representation and warranty that it will attain Substantial Performance of the *Work* and Ready-for-Takeover within the Contract Time stated in Article A-1.3 of this Contract. The *Contractor* acknowledges that it has been advised by the *Owner* that it is critical to the *Owner* that Substantial Performance of the *Work* and Ready-for-Takeover is achieved within the Contract Time. The *Contractor* agrees that time is of the essence in the performance of the *Contractor*'s obligations under this Contract.
- 10.2 The *Contractor* further acknowledges its understanding that the *Owner* is responsible and must account to the Government of Ontario, its customers and passengers and the residents of Northern Ontario. A failure by the *Contractor* to attain Substantial Performance of the *Work* and Ready-for-Takeover within the Contract Time will result in damages to the *Owner* and to the Government of Ontario, its customers and passengers and the residents and businesses in Northern Ontario, which would be difficult or impractical to quantify but would nevertheless have a significant negative impact on the *Owner* and its ability to provide the services the *Owner* is obliged to provide to the residents and businesses in Northern Ontario.
- 10.3 Given the significance of the requirement for the *Contractor* to achieve Substantial Performance of the *Work* and Ready-for-Takeover, as described in Article A-10.2, the *Contractor* further acknowledges and agrees that, without limiting the *Owner*'s entitlement to any additional or other damages, if it fails to achieve Substantial Performance of the *Work* and Ready-for-Takeover within the Contract Time, the *Owner* will incur substantial damages and the extent of such damages shall be incapable or very difficult of accurate measurement. Nonetheless, the parties acknowledge that as of the effective date of this Contract, the amount of liquidated damages set forth in subparagraph 10.4 below represents a good faith estimate on the part of the parties as to the actual potential damages that the *Owner* would suffer because of late completion of the Project. It is expressly acknowledged and agreed by and between the parties that the amount of such liquidated damages does not include any penalty. Notwithstanding the foregoing, where the Project is delayed beyond the Contract Time, the *Owner* shall be entitled to (i) the liquidated damages as calculated pursuant to Article A-10.4, or (ii) in the event that the *Contractor* claims that this liquidated damages provision is invalid or unenforceable and the *Contractor* prevails on such a defence, the damages arising from the delay suffered by the *Owner* including, without limitation, consequential, special, incidental, and indirect damages, costs and other expenses incurred or suffered by the *Owner*.

- 10.4 The Owner shall require that the Contractor pay to the Owner (or have deducted from Contract payments) liquidated damages at the per diem rate set out in the Contract Documents for each calendar day of delay beyond the prescribed date for Ready-for-Takeover until Ready-for-Takeover is achieved and certified, pursuant to the terms of the Contract. If there is no per diem rate set out in the Contract Documents, the Contractor shall pay to the Owner the Administration Costs incurred by the Owner as a result of the delay.
- 10.5 Liquidated damages will be assessed as incurred and reflected as deductions from amounts that may be due under any applications for payment pending at the time that such liquidated damages are assessed. All liquidated damages not deducted from payments prior to final payment shall be deducted from the final payment to be made by the Owner to the Contractor pursuant to GC 5.5 FINAL PAYMENT and any amount of liquidated damages in excess of the final payment amount, shall be paid by the Contractor to the Owner, within 30 days following a written demand by the Owner for such payment.
- 10.6 The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or any other alternative claim that may be available to the Owner.”

AMENDMENTS TO THE DEFINITIONS

7. DEFINITIONS

7.1 Add the following new definitions:

Acceptance and *Accepted* means the *Owner* and the *Consultant* acknowledges that the work for a *Submittal* has been completed and that the *Submittal* on its face conforms to the requirements of the *Contract Documents*. *Acceptance* does not mean confirmation by the *Owner* or the *Consultant* that the *Submittal* does not contain errors or omissions, defects, deficiencies or deviations from the *Contract Documents*. Wherever the words “acceptance” and “accepted” are used in the *Contract Documents*, they shall have the meaning set out in this definition even if the words are not capitalized.

Administration Costs means those costs and expenses incurred by the *Owner* as a result of carrying out a process or activity due to a delay in the performance of the *Work* by the *Contractor* and include:

- (a) additional fees payable by the *Owner* to the *Consultant* on a per diem basis according to the *Consultant's* personnel rates;
- (b) the *Owner's* personnel costs associated with the delay, in an amount solely determined by the *Owner*; and
- (c) any additional costs or loss of revenue incurred by the *Owner* due to the delay.”

Adjudication means construction dispute interim adjudication as defined under the *Construction Act*.

The *Arbitration Act* means the *Arbitration Act*, 1991, S.O. 1991, c. 17, as amended.

As-Built Drawings means a set of drawings that are marked-up during construction by the *Contractor* that show how the structures and other parts of the *Work* were actually constructed versus how the structures and other parts of the *Work* were originally designed and “*As-Built Record Drawings*” means the *As-Built Drawings* prepared by the *Contractor* following completion of the *Work* that are *Submitted* to the *Owner* with the *Close-Out Documentation*.

Authority Having Jurisdiction or AHJ means the federal, provincial or municipal entity that is responsible for enforcing codes, standards and regulations relating to building construction, has the power to pass regulations to direct, specify and govern elements or activities of construction projects such as codes, safety, health or standards of manufacture or installation.

Close-out Documentation has the meaning given in GC 5.5.1.2.

Confidential Information means all information of the *Owner* that is confidential by its nature or in the circumstances in which it is received, including without limitation *Personal Information* and all confidential information in the custody or control of the *Contractor*, regardless of whether it is identified as confidential or not,

which comes into the knowledge, possession or control of the *Contractor* in connection with this *Contract*, but *Confidential Information* does not include information that:

- .1 is or becomes generally available to the public without fault or breach by the *Contractor*, but only after that information becomes generally available to the public;
- .2 the *Contractor* can demonstrate to have been rightfully obtained by the *Contractor* without any obligation of confidence from a third party who had the right to transfer or disclose it to the *Contractor* free of any obligation of confidence;
- .3 the *Contractor* can demonstrate to have been rightfully known to or in the possession of the *Contractor*, free of any obligation of confidence, when disclosed; or
- .4 is independently developed by the *Contractor* without the use of any of the *Owner's Confidential Information*.

Conflict of Interest includes, but is not limited to, any situation or circumstance where the interests, conduct, other commitments or relationships of a *Contractor*, a *Contractor's* family member or an officer, director or employee of the *Contractor* could or could be perceived to, directly or indirectly, compromise, impair or be in conflict with the interests of the *Owner*.

Construction Act means the *Construction Act*, R.S.O. 1990, c. C.30, as amended, including all regulations passed under it that are enforceable as of the date of execution of this *Contract*. For certainty, the first procurement process for the *Project* (i.e., the "improvement" as that term is defined in the *Construction Act*) was commenced on or after October 1, 2019 and Parts I.1 (Prompt Payment) and II.1 (Construction Dispute Interim Adjudication) of the *Construction Act* apply to this *Contract*.

The *Construction Schedule* or construction schedule means the schedule for the performance of the *Work Submitted* by the *Contractor* and *Accepted* by the *Owner* pursuant to GC 3.4 – CONSTRUCTION SCHEDULE, including any amendments to the *Construction Schedule* made pursuant to the *Contract Documents*.

A *Dispute* means all unresolved claims, disputes or controversies of any kind arising out of or in connection with this *Contract* or the carrying out of the *Work*.

Environmental Contaminants means any substance, material or waste defined, regulated, listed or prohibited by *Environmental Laws*.

Environmental Laws means all applicable federal, provincial, territorial, municipal and local laws, statutes, ordinances, by-laws and regulations, judgments, decrees, common laws and principles thereof, and orders, directives and decisions rendered or issued by any *Authority Having Jurisdiction* relating to *Environmental Contaminants* or the protection of human health, natural resources or the environment.

Estimate means a calculation of the quantity or cost of the *Work* or part of it depending on the context.

Excess Soil means "excess soil" as that term is defined under section 3 of the *Excess Soil Regulation*.

Excess Soil Regulation means O. Reg. 406/19: On-Site and Excess Soil Management to the *Environmental Protection Act*, R.S.O. 1990, c. E.19., as amended.

Extended Warranty means the extended warranties described in the *Specifications* and *Extended Warranty Period* means the period or periods described in the *Specifications*;

Force Majeure means an event or a cause beyond the control of a party, which may include war, interference by civil or military authorities, civil insurrection, local or national emergency, blockade, seizure, riot, sabotage, vandalism, terrorism, earthquake, flood, act of God, accident, fire, nuclear or other explosion, disease, epidemic, pandemic, quarantine restriction, strike, lockout or other labour disturbance, governmental embargo, or changes to any acts, orders, legislation, regulations, directives, or priorities of any government or *Authority Having Jurisdiction*; provided such event is not caused by the affected party's negligence, default, failure to exercise reasonable diligence, bankruptcy or insolvency. A *Force Majeure* event or cause does not include an inability to pay or a lack of financial resources unless it is due to a failure of the province to approve the appropriation from the Consolidated Revenue Fund for the Project.

Impact Assessment Reports means the impact assessment reports, if any, listed in the RFP related to the *Fisheries Act*; *Navigable Waters Act*; *Lakes and Rivers Improvement Act*; heritage reviews; *Endangered Species Act* and *Species at Risk Act*; terrestrial resources (vegetation, wildlife, other features); socio-economic impacts and Indigenous consultations.

Intellectual Property means any improvement, invention or discovery, whether or not patented or patentable, any technical data, know-how or trade secret, any design, any computer software or any work subject to copyright, whether or not such design or copyright is registered or registrable and all Intellectual Property Rights contained, embedded or disclosed in the *Work*.

Notice of Non-Payment means a notice of non-payment of holdback (Form 6) or a notice of non-payment (Form 1.1) under the *Construction Act*, as applicable to the circumstances.

Payment Period or payment period means the fixed segments of time for which the *Contractor* shall be entitled to claim payment for *Work* performed during such period, as agreed upon by the *Owner* and the *Contractor* at the first pre-construction meeting. To be effective, such agreement must be in writing or reflected in the final and approved pre-construction meeting minutes. In the event that the *Owner* and the *Contractor* do not fix the segment of time for each *Payment Period* at the first pre-construction meeting, then each *Payment Period* shall be a one (1) month period during which *Work* was performed, with the start and end dates of each *Payment Period* deemed to be the first (1st) calendar day of the applicable month and the last calendar day of the same month, respectively.”

Personal Information means information that relates to an identifiable individual or that identifies or may identify an individual as defined in section 2 of the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended.

Pre-Invoice Submission Meeting has the definition given to it under GC 5.2.1.

Proper Invoice means a “proper invoice” as that term is defined in Section 6.1 of the *Construction Act* that complies with the minimum requirements set out in Schedule A to the Supplementary Conditions.

Proper Invoice Submission Date is the dated referenced in GC 5.2.2.

Restricted Period (Adjudication) means the (inclusive) period of time between November 15 in one calendar year to January 2 in the next calendar year, in any given year throughout the duration of the *Contract*.

Restricted Period (Proper Invoice) means the (inclusive) period of time between December 10 to December 28 in any given year throughout the duration of the *Contract*.

RFP means the procurement documents used by the *Owner* for the procurement of the *Contractor* for the *Project*.

Statutory Declaration means the “Ontario Northland Statutory Declaration of Progress Payment Distribution by Contractor” form, attached to the Supplementary Conditions as Schedule “B”.

Submittal(s) means all documentation prepared by the *Contractor* and submitted to the *Owner* and/or the *Consultant* for review and *Acceptance* in accordance with the *Contract Documents*.

Third-Party Property Owner means the owner, tenant or other person having the right to use a property.

Warranty Period means the period during which the *Contractor* provides a warranty for the *Work* described in GC 12.3.

Waste Management Plan means the plan to be submitted by the *Contractor* to the *Owner* and the *Consultant* described in GC 3.11.1 and *Waste Management Report* has the meaning described in the Specifications.”

7.2 Delete the definition of “*Consultant*” and replace it with the following:

“The *Consultant* is the *Owner’s* project manager designated by the *Owner* to be the *Owner’s* representative for the purposes of the *Contract*. All references to the *Consultant* in the *Contract Documents* shall mean the *Owner* and, unless otherwise provided in the *Contract Documents*, any requirement for a decision or opinion, in writing

or otherwise, by the *Consultant* shall mean a decision of the *Owner*. References to the “Engineer” in the Specifications or to the “Contract Administrator” in OPSS shall mean the *Consultant* as defined herein.”

7.3 At the end of the definition of “*Drawings*”, add the following words “and a Waste Management Plan”.

7.4 Delete the definition of “*Contract Price*” and replace it with the following:

“*Contract Price* is the amount payable by the *Owner* to the *Contractor* for *Work* to be completed under the *Contract* in accordance with the method and manner of payment stipulated in the *Contract Documents* and the lump sum price submitted by the *Contractor* in its proposal as stipulated in Article A-4.1 as amended by any *Change Orders*.”

7.5 Delete the definition of *Payment Legislation*.

7.6 Amend the definition of *Ready-for-Takeover* by deleting all the words after “as verified” and replacing them with “and *Accepted* by the *Owner*.”

AMENDMENTS TO THE GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

8. GC 1.1 CONTRACT DOCUMENTS

8.1 Where a General Condition or paragraph of the General Conditions of the Stipulated Price Contract is deleted by these Supplementary Conditions, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, and the numbering of the deleted item will be retained, unused.

8.2 Delete paragraph 1.1.3 and replace it with the following:

“1.1.3 “The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Owner* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* shall comply with the standard of care described in paragraph 3.12.1 of the *Contract*. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Owner* for the accuracy of the *Contract Documents*. Provided it has exercised the degree of care and skill described in this paragraph 1.1.3, the *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents* which the *Contractor* could not reasonably have discovered. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall immediately notify the *Owner* and shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Owner*. If the *Contractor* finds discrepancies in and/or omissions from the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, the *Contractor* must immediately notify the *Owner* by means of a written Request for Information (“RFI”) and the *Consultant* will provide written instructions or explanations. The *Owner* shall not be responsible for oral instructions.”

8.3 Delete paragraph 1.1.4 and replace it with the following:

“1.1.4 Notwithstanding the foregoing, errors, inconsistencies and/or omissions shall not include lack of reference on the Drawings or in the Specifications to labour and/or *Products* that are required or normally recognized within respective trade practices as being necessary for the complete execution of the *Work*. The Contractor shall not use RFIs, issued during execution of the *Work*, in and of themselves to establish a change and/or changes in the *Work* pursuant to Part 6 – CHANGES IN THE WORK. In the event an RFI or the cumulative effect of RFIs leads to what the *Contractor* considers to be a change in the *Work*, then the procedure under Part 6 – CHANGES IN THE WORK shall be followed.”

8.4 Delete paragraph 1.1.5.1 in its entirety and replace it with new 1.1.5.1:

“the order of priority of documents, from highest to lowest, shall be:

- Special Provisions, if any
- ONTC Special Supplementary Conditions, if any
- ONTC Supplementary Conditions to CCDC 2
- Agreement between the Owner and the Contractor
- Definitions
- General Conditions
- Addenda to the Request for Proposals (“RFP”)

- Schedule 2-A to the RFP – RFP Data Sheet
- Schedule 3-A-1 to the RFP – Scope of Work
- RFP Part 4 – Form 8 SCHEDULE OF MATERIALS, if accepted
- Schedule 3-A-2 to the RFP – Specifications Division 00 and Division 01
- Schedule 3-A-3 to the RFP – Reference Documentation
- Schedule 3-A-4 to the RFP – Technical Specifications and IFT Drawings
- Contractor’s Proposal in Part 4 of the RFP in response to the RFP”

8.5 Add a new subparagraph 1.1.5.6 as follows:

“.6 Schedules of Division 01 - General Requirements of the *Specifications* shall form part of and be read in conjunction with the technical specification section.”

8.6 Add a new sentence to the end of paragraph 1.1.9 as follows:

“The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Owner* to settle *Disputes* among the *Subcontractors* and *Suppliers* in respect to such divisions.”

8.7 Delete paragraph 1.1.10 in its entirety and replace it with new paragraph 1.1.10:

“All *Submittals* and *Intellectual Property* rights produced by or resulting from the *Work*, including all *Specifications*, *Drawings*, models and copies thereof, shall vest in the *Owner* and are the sole and absolute property of the *Owner* as and when created. The *Contractor* hereby irrevocably assigns and conveys and agrees to assign and convey, without further consideration, all right, title and interest in and to the *Intellectual Property* rights produced or resulting from the *Work*, in perpetuity and throughout the world, to the *Owner* and its successors and assigns. This paragraph 1.1.10 shall survive termination of the *Contract*.”

8.8 Add new paragraphs 1.1.12, 1.1.13, 1.1.14, 1.1.15, 1.1.16 and 1.1.17 as follows:

1.1.12 The *Owner* shall provide the *Contractor*, without charge, an electronic version of the *Contract Documents*.”

1.1.13 If an item is shown on one document, and it can be reasonably inferred that it was intended to include work not shown on other related documents, the *Contract Price* shall nevertheless include for the cost of the item of work, unless the *Owner* agrees otherwise.

1.1.14 Where a provision in the *Contract* is made for the giving or issuing of any *Notice in Writing*, consent, Acceptance, approval, certificate or determination by any person, unless otherwise specified such *Notice in Writing*, consent, *Acceptance*, approval, certificate or determination shall be in writing and shall not unreasonably be withheld or delayed.

1.1.15 The *Contractor* shall keep one copy of the current *Contract Documents*, *Supplemental Instructions*, contemplated change orders, *Change Orders*, *Change Directives*, reviewed *Shop Drawings*, reports and records of meetings at the *Place of Work* in good order and available to the *Owner*.

1.1.16 The *Contractor* shall keep one copy of current standards and manufacturers’ literature specified in the *Contract Documents* at the *Place of Work* in good order and available to the *Owner* for the duration of the *Work*.

1.1.17 The *Drawings* are, in part, diagrammatic and are intended to convey the scope of the *Work* and indicate general and appropriate locations, arrangement and sizes of materials. The *Contractor* shall obtain more accurate information about the locations, arrangement and sizes from study and coordination of the *Drawings* and shall become familiar with conditions and spaces affecting these matters before proceeding with the *Work*. Where site conditions require minor changes in indicated locations and arrangements, the *Contractor* shall make such changes at no additional cost to the *Owner*.”

9. GC 1.2 LAW OF THE CONTRACT

9.1 Delete paragraph 1.2.1 in its entirety and replace it with new paragraph 1.2.1:

"This *Contract* shall be governed by and constituted in accordance with the laws in force in the Province of Ontario excluding any conflict of laws principles. The parties hereby irrevocably attorn to the exclusive jurisdiction of the courts of the Province of Ontario for any legal proceedings arising out of this *Contract* or the performance of the obligations hereunder."

10. GC 1.4 ASSIGNMENT

10.1 Delete paragraph 1.4.1 in its entirety and replace it with new paragraph 1.4.1:

"Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent, in the case of the *Owner*, is at the sole discretion of the *Owner*. In the event of an assignment of the *Contract* by the *Contractor*, such assignment shall require prior written consent of the *Owner* and shall not relieve the *Contractor* from its obligations and liabilities hereunder."

11. GC 2.1 AUTHORITY OF THE CONSULTANT

11.1 Delete paragraph 2.1.1 in its entirety and replace it with the following:

"2.1.1 The *Owner's* project manager shall have the authority to act on behalf of the *Owner* for all matters arising under the *Contract*."

11.2 Delete paragraph 2.2.2 in its entirety.

12. GC 2.2 ROLE OF THE CONSULTANT

12.1 Delete paragraph 2.2.3 in its entirety.

12.2 Delete paragraph 2.2.4 in its entirety.

12.3 Delete paragraph 2.2.6 in its entirety and replace it with the following:

"2.2.6 If there is a *Dispute* between the *Owner* and the *Contractor* regarding the performance of the *Work* or the interpretation of the *Contract Documents*, the parties shall resolve the *Dispute* in accordance with PART 8 – DISPUTE RESOLUTION."

12.4 Delete paragraph 2.2.7 in its entirety.

12.5 Delete paragraph 2.2.8 in its entirety.

12.6 Delete paragraph 2.2.9 in its entirety.

12.7 Delete paragraph 2.2.10 in its entirety.

12.8 Amend paragraph 2.2.12 by adding the following to the end of that paragraph:

"The Supplemental Instructions are not a change in the Contract Documents. If, in the opinion of the Contractor, the Supplemental Instruction requires an adjustment in the Contract Price or in the Contract Time, it shall, within three (3) Working Days after receipt of a Supplemental Instruction provide the Consultant and the Owner with Notice in Writing to that effect. Failure to provide Notice in Writing within the time stipulated in this paragraph 2.2.12 shall be deemed an acceptance of the Supplemental Instruction by the Contractor without adjustment in the Contract Price or Contract Time."

12.9 Delete paragraph 2.2.18 in its entirety.

13. GC 2.3 REVIEW AND INSPECTION OF THE WORK

13.1 Add new paragraph 2.3.8 as follows:

"Where inspection and testing services are specified, the service provider employed for such services shall be the service provider named by the *Owner*."

13.2 Add new paragraph 2.3.9 as follows:

"Where standards of performance are specified and the *Work* does not comply with the specified standard of performance, the deficiency in the *Work* shall be corrected as directed by the *Consultant*. Subsequent testing to ensure that the standard of performance has been attained (including re-testing by *Owner*), shall be carried out at the *Contractor's* expense and shall not be paid from the cash allowances described in GC 4.1."

14. GC 2.4 DEFECTIVE WORK

14.1 Add new paragraphs 2.4.1.1, 2.4.1.2, 2.4.1.3 and 2.4.1.4 as follows:

- .1 Without limiting the foregoing, the *Contractor* shall rectify, in a manner acceptable to the *Owner*, all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Owner*.
- .2 The *Contractor* shall prioritize the correction of any *Defective* work which, in the sole discretion of the *Owner*, adversely affects the day to day operations of the *Owner*.
- .3 All such corrections of defective work and deficiencies shall be at the *Contractor's* expense.
- .4 If the *Contractor* fails to do the work to correct the defective *Work* or deficiencies, the *Owner* may carry out such remediation work by its own forces or by other *Contractors* and the *Owner* shall be entitled to recover from the *Contractor* the costs thereof or may deduct the same from any monies due or that become due to the *Contractor*."

14.2 Amend paragraph 2.4.3 by deleting the last sentence and replacing it with the following:

"If the *Owner* and the *Contractor* do not agree in the difference in value, they shall resolve the disagreement pursuant to Part 8 – DISPUTE RESOLUTION."

14.3 Add new paragraph 2.4.4 as follows:

"2.4.4 Neither the *Acceptance* of the *Work* by the *Owner*, nor any failure by the *Owner* to identify, observe or warn of defective *Work* or any deficiency in the *Work* shall relieve the *Contractor* from the sole responsibility for rectifying such defect or deficiency at the *Contractor's* sole cost, even where such failure to identify, observe or warn is negligent."

15. GC 2.5 EMERGENCY SITUATIONS

15.1 Add new GC 2.5 EMERGENCY SITUATIONS as follows:

- .1 The *Owner* has the right to determine the existence of an emergency situation and, when such an emergency situation is deemed to exist, the *Owner* may instruct the *Contractor* to take action to remedy the situation. If the *Contractor* does not take timely action or, if the *Contractor* is not available, the *Owner* may direct others to remedy the situation. Any such action or direction taken by the *Owner* shall not relieve the *Contractor* of its responsibilities as the "Constructor" pursuant to the *Occupational Health and Safety Act* (Ontario).
- .2 If the emergency situation was the fault of the *Contractor*, the remedial work shall be completed at the cost of the *Contractor* and with no additional cost to the *Owner* and the *Owner* shall be entitled to seek reimbursements for all costs associated with the remedial work including the cost of work done by third parties.
- .3 If the emergency situation was not the fault of the *Contractor*, the *Owner* shall pay for the remedial work."

16. GC 3.1 CONTROL OF THE WORK

16.1 Add new paragraph 3.1.3 as follows:

"Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify, at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not

apparent, the *Contractor* shall immediately notify the *Owner* in writing and obtain written clarification from the *Owner* before proceeding with any part of the affected *Work*.”

16.2 Add new paragraph 3.1.4 as follows:

“The *Contractor* shall perform the work in a good and workmanlike manner, using new materials, in accordance with all applicable laws and current best practices and standards in the construction industry at the *Place of Work*. The *Contractor* acknowledges that both time and quality are of the essence and the *Contractor* will perform the *Work* or cause the *Subcontractors* and *Suppliers* to perform the *Work* in accordance with the Construction Schedule, as amended from time to time, and in an expeditious and professional manner.”

17. GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

17.1 Add new paragraph 3.2.3.5 as follows:

“Subject to GC 9.4 – CONSTRUCTION SAFETY, for the *Owner’s* own forces and for *Other Contractors*, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation of the *Place of the Work*, including all of the responsibilities of the “Constructor” under the *Occupational Health and Safety Act* (Ontario).”

18.2 Add new paragraph 3.2.3.6 as follows:

“provide for the co-ordination of the activities and work of *Other Contractors* and *Owner’s* own forces with the *Work of the Contract*.”

18. GC 3.4 CONSTRUCTION SCHEDULE

18.1 Delete paragraph 3.4.1 in its entirety and replace it with the following:

“3.4.1 The *Contractor* shall:

- .1 within 10 *Working Days* from the date of the *Contract* award, prepare for the *Owner’s* review and *Acceptance*, a construction schedule, including identification of the critical path of the *Work*, the schedule of operations, the proposed methods of construction and sequence of *Work*, and the time the *Contractor* proposes to complete the various items of *Work* within the *Contract Time*. The schedule shall be designed to ensure conformity with the *Contract Time*. The schedule will be in a Gantt chart format in either .pdf or excel format and include:
 - (a) activity sequences and durations;
 - (b) process for obtaining any required permits;
 - (c) work block planning and track protection requested;
 - (d) special allocation of labour and *Products*;
 - (e) processing of *Shop Drawings* and samples;
 - (f) delivery of *Products* involving long lead time procurement;
 - (g) usage and occupancy requirements of the *Owner* of those portions of the *Work* having usage or occupancy priority;
 - (h) *Substantial Performance of the Work*, and *Ready-for-Takeover* reflecting that such milestones will be achieved by no later than the dates specified in Article A-1.3; and
 - (i) any other schedule requirements set out in the *Contract Documents*.

If the construction schedule submitted by the *Contractor* is not *Accepted* by the *Owner*, the *Contractor* shall make revisions to the construction schedule until it is *Accepted* by the *Owner*.

Once *Accepted* by the *Owner*, the schedule submitted by the *Contractor* shall become the "*Construction Schedule*." Notwithstanding any other terms of this *Contact*, the *Contractor* shall not be entitled to receive any payment from the *Owner* until a construction schedule has been submitted by the *Contractor* and *Accepted* by the *Owner*. The *Owner* may, at its sole discretion, not issue an order to commence *Work* until the schedule has been received and *Accepted*.

- .2 during performance of the *Work* and in accordance with the controls and reporting requirements in the *Contract Documents*, provide for the *Owner's* review and *Acceptance*, progress reports updating the *Construction Schedule*, reporting on the progress achieved, percentage of completion, schedule status and financial status with areas of immediate concern highlighted. If the schedule is affected by approved *Change Orders*, the *Contractor* shall submit an updated *Construction Schedule*, if requested by the *Owner*, within 7 *Working Days* of the request. This updated schedule shall show how the *Contractor* proposes to perform the balance of the *Work*, so as to complete the *Work* within the *Contract Time*.
- .3 provide progress reports with each application for payment, in the form provided by the *Owner* attached as Schedule C, for review and *Acceptance*, including an update of the *Construction Schedule* referred to in paragraph 3.4.1."

18.2 Add new paragraph 3.4.2 and 3.4.3 as follows:

"3.4.2 If,

- .1 at any time it should reasonably appear to the *Owner* that the actual progress of the *Work* is behind schedule or is likely to become behind schedule, based on critical path methodology, and *Notice in Writing* of such opinion is given to the *Contractor*; or
- .2 the *Contractor* becomes aware of or notices a slippage in the *Construction Schedule*,

then the *Contractor* shall take appropriate steps to cause the actual progress of the *Work* to conform to the *Construction Schedule* and shall produce and present to the *Owner* for its review and *Acceptance* within 5 *Working Days* after becoming aware of the schedule slippage a recovery plan demonstrating how the *Contractor* will achieve the recovery of the *Construction Schedule*.

3.4.3 The *Contractor* is responsible for performing the *Work* within the *Contract Time*. Any schedule submissions revised from the *Accepted* baseline *Construction Schedule* or *Accepted* revised *Construction Schedule* pursuant to GC 3.4 CONSTRUCTION SCHEDULE during construction are deemed NOT to be approved extensions to the *Contract Time*. Revisions to the *Construction Schedule* shall not be made without the prior written *Acceptance* of the *Owner*. All requests by the *Contractor* for a revision to the *Construction Schedule* that includes an extension to the *Contract Time* or adjustment to the date(s) for *Substantial Performance of the Work* or *Ready-for-Takeover* must be approved by the *Owner* through an executed *Change Order*."

19. GC 3.5 SUPERVISION

19.1 Amend paragraph 3.5.1 by adding at the end of that paragraph:

"..., and upon the *Contractor* obtaining the *Owner's* written consent, which consent will not be unreasonably withheld."

19.2 Add new paragraph 3.5.3 as follows:

"Notwithstanding paragraph 3.5.2, the representative of the *Contractor* attending a meeting with the *Owner* or the *Owner's* representative shall be deemed to have authority to act on behalf of the *Contractor* and bind the *Contractor* in matters related to this *Contact*."

19.3 Add new paragraph 3.5.4 as follows:

"The *Owner* may, at any time during the course of the *Work*, request the replacement of the appointed *Contractor's* representative(s), where the grounds for the request involve conduct on the part of the *Contractor's* representative(s) which jeopardizes the safety of the *Owner's* operations or the *Work* or the proper progress of the *Work*. Immediately upon receipt of the request, the *Contractor* shall make arrangements to appoint an

Acceptable replacement. The *Contractor* shall indemnify and hold the *Owner* harmless from and against any damages, costs, expenses, claims, injuries and other liabilities suffered by the *Owner* arising from the conduct of the representative that is being replaced.”

20. GC 3.6 SUBCONTRACTORS AND SUPPLIERS

20.1 Add new paragraph 3.6.1.4:

“ensure the *Subcontractors* and *Suppliers*, while working on the *Owner’s* property, are aware of and comply with the *Owner’s* policies, including its Fit for Duty Policy, and with the Ontario Northland Operating Manual, including the Current Summary Bulletin, the current Ontario Northland Time Table, C.R.O.R. 2022, Infrastructure Special Instructions, Dangerous Goods and Ontario Northland General Operating Instructions, as applicable.”

20.2 Delete paragraph 3.6.2 in its entirety and replace it with a new paragraph 3.6.2

“The *Contractor* shall not change *Subcontractors* or *Suppliers* identified in the *Contract Documents* without the prior written approval of the *Owner* which approval will not be unreasonably withheld.

20.3 Delete paragraphs 3.6.3 and 3.6.4 in their entirety and replace them with “Intentionally Left Blank.”

21.4 Add new paragraph 3.6.7 as follows:

“The responsibility as to which *Supplier* and/or *Subcontractor* provides the specific labour, *Products* and services for each item of work rests solely with the *Contractor*, within and in accordance with the requirements and limitations listed in the *Contract Documents* with respect to approval of *Suppliers* and/or *Subcontractors* permitted to perform work on the *Project*.”

21. GC 3.7 LABOUR AND PRODUCTS

21.1 Amend paragraph 3.7.1 by adding the words, “..., agents, *Subcontractors* and *Suppliers* ...” after the word “employees”.

21.2 Amend paragraph 3.7.2 by adding the following words at the beginning of the paragraph: “Except as otherwise provided in the technical *Specifications*” and adding the following sentence at the end of that paragraph:

“The *Contractor* represents and warrants that the *Products* supplied by the *Contractor* in accordance with the *Contract* are not subject to any conditional sales contract and are not subject to any security rights obtained by any third party which may subject any of the *Products* to seizure and/or removal from the *Place of the Work*.”

21.3 Add new paragraph 3.7.4 as follows:

“Upon receipt of a *Notice in Writing* from the *Owner*, the *Contractor* shall take action to rectify any situation involving its employee, agent, *Subcontractor* or *Supplier* whose work is unsatisfactory to the *Owner* or who are considered by the *Owner* to be unskilled or otherwise objectionable. If after giving sufficient warning the *Contractor* is not able to reasonably rectify such situation, then such employee, agent, *Subcontractor* or *Supplier* shall be dismissed from the *Place of the Work* and the *Contractor* shall indemnify and hold the *Owner* harmless from and against any damages, costs, expenses, claims, injuries and other liabilities suffered by the *Owner* arising from the dismissal of such employee, agent, *Subcontractor* or *Supplier*.”

21.4 Add new paragraph 3.7.5 as follows:

“The *Contractor* is responsible for the safe on-site storage of *Products* and their protection (including *Products* supplied by the *Owner* and *Other Contractors* to be installed under the *Contract*) in such ways as to avoid dangerous conditions or contamination to the *Products* or other persons or property and in locations at the *Place of the Work* identified by the *Contractor* and *Accepted* by of the *Owner*. The *Owner* shall provide all relevant information on the *Products* to be supplied by the *Owner* or *Other Contractors*.”

21.5 Add new paragraph 3.7.6 as follows:

“The *Contractor* shall not employ any persons to perform *Work* whose labour affiliation, or lack thereof, is incompatible with other labour employed in connection with the *Work*. Any costs arising from labour disputes, as

a result of the employ of any such person by the *Contractor*, its *Subcontractors* or *Suppliers* shall be at the sole expense of the *Contractor*.”

21.6 Add new paragraph 3.7.7 as follows:

“The *Contractor* and the *Owner* and its representatives shall cooperate and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the work at the *Place of the Work*, including cooperation to attempt to avoid work stoppages, trade union jurisdictional disputes and other labour disputes.”

22. GC 3.8 SHOP DRAWINGS

22.1 Delete paragraph 3.8.7 and replace it with the following:

“3.8.7 The *Owner* will review and return *Shop Drawings* in accordance with the schedule agreed upon as described in paragraph 3.8.2, or, in the absence of such schedule, with reasonable promptness. If, for any reason, the *Owner* cannot process them within the agreed-upon schedule or with reasonable promptness, the *Owner* shall notify the *Contractor* and they shall meet to review and develop a revised schedule for processing such *Shop Drawings* that is *Acceptable* to the *Owner*. The *Contractor* shall update the *Shop Drawings* schedule to correspond to changes in the *Construction Schedule*. Changes in the *Contract Price* or *Contract Time* may be made only in accordance with GC 6.1, GC 6.2 or GC 6.3.”

22.2 Add new paragraphs 3.8.8, 3.8.9, 3.8.10 and 3.8.11 and as follows:

“3.8.9 The *Contractor* shall provide *Shop Drawings* and *Submittals* in the form specified, or if not specified, as directed by the *Owner*. *Shop Drawings* provided by the *Contractor* to the *Owner* shall indicate by stamp, date and signature of the person responsible for the review that the *Contractor* has reviewed each one of them. Certain *Specifications* sections require the *Shop Drawings* to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the *Place of the Work* and shall have expertise in the area of practice reflected in the *Shop Drawings*.

3.8.10 *Shop Drawings* which require approval of any *Authority Having Jurisdiction* shall be provided to such authority by the *Contractor* for the authority’s approval.

3.8.11 The *Contractor* shall provide revised *Shop Drawings* to correct those which the *Owner* rejects as inconsistent with the *Contract Documents*, unless otherwise directed by the *Owner*. The *Contractor* shall notify the *Owner* in writing of any revisions to the *Shop Drawings* other than those requested by the *Owner*.

3.8.12 Reviewed *Shop Drawings* shall not authorize a change in the *Contract Price* and/or the *Contract Time*.”

23. GC 3.9 USE OF THE WORK

23.1 Add new GC 3.9 – USE OF THE WORK as follows:

“GC 3.9 USE OF THE WORK

3.9.1 The *Contractor* shall confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and operations of employees and *Subcontractors* to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of the Work*.

3.9.2 The *Contractor* shall not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety of the *Work*.

3.9.3 The *Owner* shall have the right to enter or occupy the *Place of the Work* in whole or in part for the purpose of placing fittings and equipment, or for other use before *Ready-for-Takeover*, if, in the opinion of the *Owner*, such entry and occupation does not prevent or substantially interfere with the *Contractor* in the performance of the *Contract* within the *Contract Time*. Such entry or occupation shall neither be considered as acceptance of the *Work* or in any way relieve the *Contractor* from its responsibility to complete the *Contract*.”

24. GC 3.10 CUTTING AND REMEDIAL WORK

24.1 Add new GC 3.10 – CUTTING AND REMEDIAL WORK as follows:

“GC 3.10 CUTTING AND REMEDIAL WORK

- 3.10.1 The *Contractor* shall perform the cutting and remedial work required to make the affected parts of the *Work* come together properly. Such cutting and remedial work shall be performed by specialists familiar with the *Products* affected and shall be performed in a manner to neither damage nor endanger the *Work*.
- 3.10.2 The *Contractor* shall coordinate the *Work* to ensure all cutting and remedial work required is kept to a minimum.”

25. GC 3.11 CLEANUP

25.1 Add new GC 3.11 – CLEANUP as follows:

“GC 3.11 CLEANUP

- 3.11.1 The *Contractor* shall comply with all requirements for cleanup at the *Place of the Work* as specified in the *Contract Documents*. The *Contractor* shall provide to the *Owner* for *Acceptance* a *Waste Management Plan*, and a waste reduction plan if required by *Environmental Laws*, for the waste products, debris and any *Excess Soils* generated by the *Work*, which plan shall comply with all *Environmental Laws* and the *Specifications*. The costs of disposing of all waste products and debris, including products and debris containing *Environmental Contaminants*, and *Excess Soil* resulting from the *Work* is included in the *Contract Price*.
- 3.11.2 Before applying for *Substantial Performance of the Work*, the *Contractor* shall remove waste products and debris and shall leave the *Place of the Work* clean and suitable for use or occupancy by the *Owner*. All products, tools, *Construction Equipment* and *Temporary Work* not required for the performance of any remaining *Work* shall be removed by the *Contractor*.
- 3.11.3 As a condition precedent to final payment, the *Contractor* shall remove any remaining products, tools, *Construction Equipment*, *Temporary Work*, waste products and debris from the *Place of the Work* to the satisfaction of the *Owner*.
- 3.11.4 In performing work to correct deficiencies or work under warranty following *Ready-for-Takeover* of the *Work*, the *Contractor* shall maintain the *Place of the Work* in a tidy condition and shall immediately remove waste products and debris.
- 3.11.5 The *Contractor* shall comply with all *Environmental Laws* in disposing of the waste products, debris and *Excess Soil* resulting from the *Work*. The *Contractor* shall assume all liability and responsibility for any waste products, debris and *Excess Soil*, including any such materials containing *Environmental Contaminants*, which are removed from the *Place of the Work* by the *Contractor* and during the transportation of the waste products, debris and *Excess Soils* to the appropriate waste disposal site. The *Contractor* shall submit landfill weigh bills from a waste disposal site as proof that all waste has been disposed of at a certified waste disposal site. The *Contractor* shall submit a *Waste Management Report* as part of the *Close-Out Documentation* described in paragraph 5.5.1.2. to be submitted with the application for verification of *Ready-for-Takeover*.
- 3.11.6 In the event that the *Contractor* fails to remove waste and debris as provided in this GC 3.11, then the *Owner* may give the *Contractor* twenty-four (24) hours' *Notice in Writing* to meet its obligations respecting clean up. Should the *Contractor* fail to meet its obligations pursuant to this GC 3.11 within the twenty-four (24) hour period next following delivery of the notice, the *Owner* may remove such waste and debris and deduct from payments otherwise due to the *Contractor*, the *Owner's* costs for such clean up, including a reasonable mark-up for *Administration Costs*.”

26. GC 3.12 PERFORMANCE BY CONTRACTOR

26.1 Add new GC 3.12 – PERFORMANCE BY CONTRACTOR as follows:

“GC 3.12 PERFORMANCE BY CONTRACTOR

- 3.12.1 In performing its obligations, duties and responsibilities under this *Contract*, the *Contractor* shall exercise the degree of care, skill and diligence that would normally be exercised by an experienced, skilled and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that, throughout this *Contract*, the *Contractor's* obligations, duties and responsibilities shall be judged, evaluated and interpreted in accordance with this standard. The *Contractor* shall exercise the same standard of care in respect of any *Products*, *Subcontractors*, *Suppliers*, personnel or procedures which it may recommend to the *Owner* or employ on the *Project*.
- 3.12.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:
- .1 The personnel and *Subcontractors* it assigns to the *Project* are appropriately experienced;
 - .2 It has a sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the *Owner's* approval, in the event of death, incapacity, removal or resignation; and
 - .3 there are no pending, threatened or anticipated claims that would have a material effect on the financial ability of the *Contractor* to perform its work under the *Contract*.”
- 3.12.3 The *Owner* has a Vendor Performance Policy which requires the *Owner* to complete an evaluation of the *Contractor's* performance of its obligations under this *Contract*. The performance evaluation of the *Contractor* for the supply of these services will be used in the assessment of the *Contractor's* proposals in response to future procurements. The performance evaluation may also result in the *Contractor* being disqualified from submitting proposals in response to future procurements in accordance with the terms of the policy. The policy can be found at <http://ontarionorthland.ca/en/requests-tenders>.”

27. 3.13 EXCESS SOIL MANAGEMENT

27.1 Add new GC 3.13 – EXCESS SOIL MANAGEMENT as follows:

“GC 3.13 EXCESS SOIL MANAGEMENT

- 3.13.1 The *Contractor* shall be solely responsible for the proper management of all *Excess Soil* at the *Place of the Work* and for performance of the *Work* in compliance with the rules, regulations and practices required by the *Excess Soil Regulation* until such time as *Ready-for-Takeover* is achieved. Without restricting the generality of the previous sentence, the *Contractor's* responsibility under this GC 3.13 includes the testing, designation, transportation, tracking, temporary and/or final placement, record keeping, and reporting of all *Excess Soil* in connection with the *Work* all in compliance with the *Excess Soil Regulation*.
- 3.13.2 The *Contractor* shall indemnify and save harmless the *Owner*, their agents, officers, directors, administrators, governors, employees, consultants, successors and assigns from and against the consequences of any and all infractions committed by the *Contractor*, or those for whom it is responsible at law, under the *Excess Soil Regulation*, or any environmental protection legislation, including the payment of legal fees and disbursements on a substantial indemnity basis.”

28. GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

28.1 Delete GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER in its entirety including all paragraphs thereunder and replace it with “Intentionally left blank.”

28.2 GC 5.2 APPLICATIONS FOR PAYMENT

28.3 Delete paragraph 5.2.1 in its entirety and replace it with a new paragraph 5.2.1:

“5.2.1 On a *Working Day* that is not more than 10 calendar days after the end of each *Payment Period*, a representative of the *Contractor* and the *Owner* shall attend a meeting to discuss and review the *Work* completed during the *Payment Period*, including quantities, if applicable (the “**Pre-Invoice Submission Meeting**”). The *Contractor* shall bring with it to the *Pre-Invoice Submission Meeting* the following:

- .1 a draft of its anticipated application for payment for the applicable *Payment Period*;
- .2 the schedule of values submitted in accordance with GC 5.2.4, and *Accepted* by the *Owner* in accordance with GC 5.2.5;
- .3 *Subcontractor* and *Supplier* invoices and supporting materials;
- .4 receipts for reimbursable expenses (where expressly permitted by the *Contract*, if at all);
- .5 accounts and records documenting the cost of performing the *Work* attributable to any *Change Order* or *Change Directive*;
- .6 any visual documentation (photos, videos, diagrams) evidencing the progress of the *Work*; and
- .7 any other documents reasonably required by the *Contract Documents* or the *Owner*.”

28.4 Delete paragraph 5.2.2 in its entirety and substitute new paragraph 5.2.2:

“5.2.2 Within 5 calendar days following the *Pre-Invoice Submission Meeting*, the *Contractor* shall deliver to the *Owner* its application for payment that complies with the requirements of GC 5.2.6 for *Work* performed during a *Payment Period* (the “**Proper Invoice Submission Date**”), provided that if the fifth (5th) calendar day following the *Pre-Invoice Submission Meeting* falls on a calendar day that is not *Working Day*, the *Proper Invoice Submission Date* shall be deemed to fall on the next *Working Day*. However, the following shall apply to the delivery of all *Contractor* applications for payment:

- .1 If the *Contractor* fails to deliver its application for payment, at the interval prescribed in GC 5.2.2, subject to written approval by the *Owner*, the *Contractor* shall not be entitled to submit its application for payment until the next prescribed interval. Should the *Owner* decide to accept an application for payment submitted after the applicable *Proper Invoice Submission Date* (which the *Owner* is under no obligation to do), such acceptance shall not be construed as a waiver of any of the *Owner*’s rights, or as a waiver or release of the *Contractor*’s obligations to strictly comply with the requirements prescribed in this GC 5.2 – APPLICATIONS FOR PAYMENT;
- .2 If an application for payment is delivered by the *Contractor* to the *Owner* on a day that is prior to an eligible *Proper Invoice Submission Date*, the application for payment will not be considered or reviewed by the *Owner* until the earliest eligible *Proper Invoice Submission Date* as identified in GC 5.2.2, at which point the application for payment will be deemed to have been received by the *Owner* for the purpose of review and evaluation;
- .3 Notwithstanding any other provision of this *Contract*, the *Contractor* shall not deliver an application for payment for consideration as a *Proper Invoice* by the *Owner*, during the *Restricted Period* (*Proper Invoice*);
- .4 The *Owner* and the *Contractor* hereby consent to the giving and receiving of *Proper Invoices* electronically and in accordance with the requirements of this GC 5.2 – APPLICATIONS FOR PAYMENTS.”

28.5 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

“but no amount claimed shall include *Products* delivered to the *Place of the Work* unless the *Products* are free and clear of all security interests, liens, and other claims of third parties, subject to claims for lien pursuant to the *Construction Act*.”

28.6 Amend paragraph 5.2.4 by deleting the words “the *Consultant*, at least 15 calendar days” and replacing them with “the *Owner* at least 30 calendar days”

- and -

add the words “in a form acceptable to the *Owner*,” after the words “*Contract Price*”.

29.7 Amend paragraph 5.2.5 by deleting the word “*Consultant*” and replacing it with “*Owner*”.

28.7 Delete paragraph 5.2.6 in its entirety and replace it with a new paragraph 5.2.6:

“5.2.6 Each application for payment submitted pursuant to GC 5.2.2 shall:

- .1 be in a form prescribed, or otherwise approved in writing, by the *Owner*;
- .2 include all the requirements for a *Proper Invoice* prescribed by the *Construction Act* and the *Contract Documents*;
- .3 be delivered to the *Owner* in the same manner as a *Notice in Writing*; and
- .4 unless otherwise directed in writing by the *Owner*, by email to pay.inv@ontarionorthland.ca and to the *Owner*’s representative listed in Article A-6.”

28.8 Amend paragraph 5.2.8 by adding the following new sentence at the end of that paragraph:

“Any *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall remain at the risk of the *Contractor* notwithstanding the title has passed to the *Owner* pursuant to GC 13.1 – OWNERSHIP OF MATERIALS.”

28.9 Add new paragraph 5.2.9 as follows:

“5.2.9 The *Contractor* shall prepare and maintain current *As-Built Drawings* which shall consist of the *Drawings* and *Specifications* revised by the *Contractor* during the *Work*, showing changes to the *Drawings* and *Specifications*, which current *As-Built Drawings* shall be maintained by the *Contractor* and made available to the *Owner* for review with each application for progress payment. The *Owner* reserves the right to retain a reasonable amount for the value of the *As-Built Drawings* not presented for review.”

28.10 Add new paragraph 5.2.10 as follows:

“5.2.10 Upon receipt of an application for payment submitted for payment by the *Contractor* in accordance with GC 5.2 - APPLICATIONS FOR PAYMENT, the *Owner* will assess whether all of the requirements for a *Proper Invoice* are satisfied and, if the application for payment does not meet the requirements, the *Owner* will return the application for payment to the *Contractor* with reasons setting out why the application for payment does not meet the requirements for a *Proper Invoice* and the *Contractor* may resubmit the application for payment with all required information within three (3) *Working Days* of the *Contractor*’s receipt of the *Owner*’s reasons. For clarity,

- .1 if an application for payment does not include all of the requirements for a *Proper Invoice* required by GC 5.2.6.2, it shall not be considered a “*Proper Invoice*” for the purposes of the *Construction Act* and the *Owner* shall have no obligation to make a payment and the time periods set out in GC 5.3 - PAYMENTS and in Section 6.4 of the *Construction Act* shall not apply until the *Contractor* has submitted an application for payment that includes all information required by GC 5.2.6.2;
- .2 if the *Contractor* fails, refuses, or neglects to resubmits its application for payment within three (3) *Working Days* after it is returned in accordance with this GC 5.2.10, the *Contractor* shall be deemed to have failed to deliver its application for payment and GC 5.2.2.1 shall apply;
- .3 where the *Contractor* disagrees with the *Owner*’s assessment that some of the of the requirements for a *Proper Invoice* required by GC 5.2.6.2 are missing from its application for payment, nothing in this GC 5.2.10 shall prevent the *Contractor* from resubmitting the same application for payment without any additional or new information; and
- .4 the *Owner* reserves the right, in its sole, absolute and unfettered discretion, to waive an error or minor irregularity in any application for payment delivered by the *Contractor* for the purposes of deeming an application for payment a “*Proper Invoice*” within the meaning of the *Construction Act*, but the *Owner* shall be under no obligation to exercise this right.”

29. GC 5.3 PAYMENT

29.1 Delete paragraph 5.3.1 in its entirety and replace it with a new paragraph 5.3.1:

“5.3.1 After receipt by the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:

.1 the *Owner* will either:

- (a) issue a certificate for payment, with a copy to the *Contractor*, in the amount applied for in the *Proper Invoice*, or
- (b) issue a certificate for payment, with a copy to the *Contractor*, for an amount determined by the *Owner* to be properly due to the *Contractor* after applying any credits, withheld amounts, or other set-offs which the *Owner* is entitled to notwithstanding any notice of dispute or disagreement that the *Contractor* may have served, along with the *Owner's* reasons why an amount other than what is claimed in the *Proper Invoice* is properly due to the *Contractor*, which finding the *Owner* may accept or amend prior to the *Owner* issuing a *Notice of Non-Payment*, if any, in accordance with GC 5.3.2;

.2 the *Owner* shall make payment to the *Contractor*, on account as provided in Article A-5,

- (a) in the amount stated in the certificate for payment, or
- (b) in the amount stated in the certificate for payment less such amount stated in the *Owner's Notice of Non-Payment* issued pursuant to GC 5.3.2,

on the 28th calendar day after receipt of a *Proper Invoice*, unless such 28th calendar day lands on a day that is other than a *Working Day*, in which case payment shall be made on the next *Working Day* after such 28th day.”

29.2 Add new paragraph 5.3.2 as follows:

“5.3.2 In the event that the application for payment delivered by the *Contractor* pursuant to GC 5.2 – APPLICATIONS FOR PAYMENT does not include the requirements for a *Proper Invoice* or if the *Owner* disputes the amount claimed as payable in the *Proper Invoice*, then the *Owner* shall within 14 calendar days of receipt of the application for payment, issue a *Notice of Non-Payment* (Form 1.1).”

29.3 Add new paragraph 5.3.3 as follows:

“5.3.3 Where the *Owner* has delivered a *Notice of Non-Payment*, as specified under GC 5.3.2, the *Owner* and the *Contractor* shall first engage in good faith negotiations to resolve the dispute. If within 10 calendar days following the issuance of a *Notice of Non-Payment*, the *Owner* and the *Contractor* cannot resolve the dispute, either party may issue a notice of Adjudication in a form prescribed under the *Construction Act*, in which case the *Owner* and the *Contractor* will agree to submit the dispute to *Adjudication* as set out under PART 8 – DISPUTE RESOLUTION. The amounts disputed and described under the *Notice of Non-Payment* shall be held by the *Owner* until all disputed amounts of the relevant *Proper Invoice* have been resolved pursuant to PART 8 – DISPUTE RESOLUTION any portion of the *Proper Invoice* which is not the subject of the *Notice of Non-Payment* shall be payable within the time period set out in paragraph 5.3.1.2.”

29.4 Add new paragraph 5.3.4 as follows:

“5.3.4 Without limitation, the *Owner* shall be entitled to deduct from or, set off against, any payment of the *Contract Price* and any other amounts payable by the *Owner* to the *Contractor* under the *Contract*:

- .1 any amount expended by the *Owner* in exercising the *Owner's* rights under this *Contract* to perform any of the *Contractor's* obligations that the *Contractor* has failed to perform;
- .2 any damages, costs or expenses (including, without limitation, reasonable legal fees and expenses) incurred by the *Owner* as a result of the failure of the *Contractor* to perform any of its obligations under the *Contract*; or

.3 any other amount owing from the *Contractor* to the *Owner* under this *Contract*.”

29.5 Add new paragraph 5.3.5 as follows:

“5.3.5 The *Contractor* represents, warrants, and covenants to the *Owner* that it is familiar with its prompt payment and trust obligations under the *Construction Act* and will take all required steps and measures to ensure that it complies with the applicable prompt payment and trust provisions under the *Construction Act* including, without limitation, section 8.1 of the *Construction Act*. Evidence of the *Contractor*’s compliance under this paragraph 5.3.5 will be made available to the *Owner* within 5 Working Days following receipt by the *Contractor* of a *Notice in Writing* making such request.”

30. GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

30.1 Delete paragraph 5.4.1.2 in its entirety and replace it with the following:

“.2 jointly with the *Contractor*, state the date of *Substantial Performance of the Work*, or a designated portion of the *Work*, in a certificate.”

30.2 Delete paragraph 5.4.2 in its entirety and replace it with the following:

“5.4.2 After the date of *Substantial Performance of the Work* is established, the *Contractor* and all *Subcontractors* who have completed their subcontracts shall complete, on a commercially reasonable efforts basis, within thirty (30) days, all deficient work including providing the required *Close-Out Documentation*, unless the reasons for any delay is *Acceptable* to the *Owner*. All deficient work not completed within the above time may be completed by the *Owner* and the cost of this work may at the option of the *Owner* be deducted from the *Contractor*’s next application for payment, or otherwise recoverable upon written demand by the *Owner* to the *Contractor*.”

30.3 Delete paragraph 5.4.3 and replace it with the following:

“5.4.3 Immediately following the issuance of a certificate of *Substantial Performance of the Work*, the *Contractor* shall publish the certificate referred to in paragraph 5.4.1.2 in the manner provided in the *Construction Act*. Failing valid publication by the *Contractor* within 3 *Working Days* following the issuance of the certificate, the *Owner* shall be at liberty to publish the certificate and back-charge the *Contractor* for its reasonable costs for doing so.”

30.4 Delete paragraph 5.4.4 and replace it with the following:

“5.4.4 After publication of the certificate of the *Substantial Performance of the Work*, the *Contractor* shall submit an application for payment of the outstanding *Construction Act* holdback amount, which application for payment shall:

- .1 include all of the requirements listed in Schedule A to these Supplementary Conditions, as applicable to the application for payment of the holdback amount; and
- .2 include a statement that the *Contractor* has not received any written notices of lien or any claims for liens from any *Subcontractor* or *Supplier*.

After the receipt of a complete application for payment of the holdback amount from the *Contractor*, the *Owner* will issue a certificate for payment of the holdback amount, provided that such amount is subject to and will only become due and payable in accordance with GC 5.4.5 and the *Construction Act*.”

30.5 Delete paragraph 5.4.5 and replace it with the following:

“5.4.5 The *Construction Act* holdback amount shall become due and payable the day immediately following the expiration of the holdback period prescribed by the *Construction Act*, subject to the occurrence of any of the following:

- .1 the preservation of a lien in respect of the *Project* that has not been satisfied, discharged or otherwise provided for in accordance with the *Construction Act*;
- .2 receipt by the *Owner* of a written notice of lien that has not been satisfied, discharged or otherwise provided for in accordance with the *Construction Act*; or

- .3 prior to the expiry of 40 calendar days following the publication of the certificate of *Substantial Performance of the Work*, the *Owner* publishes a *Notice of Non-Payment* of holdback in accordance with the *Construction Act*, setting out the amount of holdback that will not be paid, which may include non-payment to secure the correction of deficiencies and/or the completion of the *Work*.”

30.6 Add new paragraph 5.4.7 as follows:

“5.4.7 Where the *Construction Act* allows for release of *Construction Act* holdback on subcontract work which is 100% complete prior to the release of holdback contemplated under GC 5.4.5, the *Contractor* may make application to the *Owner* and the *Consultant* by written request for a review by the *Consultant* to determine the date of completion of the subcontract and shall submit such supporting material as the *Consultant* may in its discretion require, including:

- .1 Description of the scope of *Work* included in the subcontract.
- .2 Declaration of Last Supply by the *Subcontractor* as prescribed in subsection 31(5) of *the Construction Act* (Form 7).
- .3 Certificate of Completion of Subcontract as prescribed in subsection 33(1) of *the Construction Act* (Form 10).
- .4 Workplace Safety & Insurance Board Clearance Certificate for the *Contractor*, the *Subcontractor* concerned, and any other *Subcontractors* and *Suppliers* who have provided any services to the *Subcontractor*.
- .5 Statutory declaration by an officer of the *Subcontractor* in the form CCDC Document 9B - 2018.
- .6 *Contractor's* written acknowledgement to the *Owner* that the requirements of the *Contract Documents* will not be altered by early release of the *Construction Act* holdback of the completed subcontracts.
- .7 Confirmation by the bonding company that it has been notified of the intent to claim early release of holdback and does not object.
- .8 Sufficient evidence to the *Owner's* reasonable satisfaction that, as of the date of the *Contractor's* application, no claims for lien have been preserved against the *Place of the Work* that have not been vacated by the posting of security, discharged, or otherwise addressed in accordance with GC 5.8 – CONSTRUCTION LIENS.”

31. GC 5.5 FINAL PAYMENT

31.1 Delete GC 5.5 – FINAL PAYMENT in its entirety and substitute the following:

“5.5.1 When *Ready-for-Takeover* has been achieved in accordance with GC 12.1 – READY-FOR-TAKEOVER and the *Contractor* considers the *Work* is complete, and after the *Contractor* and the *Owner* have attended a *Pre-Invoice Submission Meeting* analogous to the requirement in GC 5.2.1, the *Contractor* may submit an application for final payment to the *Owner* and the *Contractor* shall:

- .1 include all of the requirements set out in GC 5.2.1, including without limitation those requirements listed in Schedule A to these Supplementary Conditions that are specific to an application for final payment;
- .2 ensure that all warranties, *Extended Warranties*, records, operation and maintenance manuals, data books, literature maintenance sheets, list of outstanding work and deficiency list, *Waste Management Report*, keys, Certificate of Clearance from WSIB, proof of publication of the certificate of *Substantial Performance of the Work* and the *As-Built Record Drawings* are submitted to the *Owner* (collectively, the “**Close-Out Documentation**”). Such submissions shall constitute requirements for the *Proper Invoice* for final payment; and
- .3 if applicable, (a) written confirmation from the *Owner* that the deficiencies or incomplete *Work* waived by the *Owner* pursuant to GC 12.1.2 have been fully rectified as of the date of the *Contractor's* application for final payment, and/or (b) written confirmation, signed by the *Owner* and the

Contractor, that the *Contract Price* has been reduced by a specified amount in exchange for the *Owner* releasing the *Contractor* of its obligation to rectify the certain outstanding deficiencies and/or incomplete *Work* waived by the *Owner* pursuant to GC 12.1.2, as detailed in such written confirmation.”

5.5.2 After receipt by the *Owner* of an application for final payment submitted by the *Contractor* in accordance with paragraph 5.5.1:

.1 the *Owner* will either:

- (a) issue, with a copy to the *Contractor*, a certificate for payment, in the amount applied for in the *Proper Invoice*, or
- (b) issue, with a copy to the *Contractor*, a certificate for payment for an amount determined by the *Owner* to be properly due to the *Contractor* after applying any credits, withheld amounts, or other set-offs which the *Owner* is entitled to notwithstanding any notice of dispute or disagreement that the *Contractor* may have served, along with the *Owner's* reasons why an amount other than what is claimed in the *Proper Invoice* is properly due to the *Contractor*, which finding the *Owner* may accept or amend prior to the *Owner* issuing a *Notice of Non-Payment*, if any, in accordance with GC 5.5.3;

.2 the *Owner* shall make payment to the *Contractor*, on account as provided in Article A-5,

- (a) in the amount stated in the certificate for payment, or
- (b) in the amount stated in the certificate for payment less such amount stated in the *Owner's Notice of Non-Payment* issued pursuant to GC 5.3.2,

on the 28th calendar day after receipt of a *Proper Invoice*, unless such 28th calendar day lands on a day that is other than a *Working Day*, in which case payment shall be made on the next *Working Day* after such 28th day.”

5.5.3 In the event that the application for final payment delivered by the *Contractor* does not include the requirements of GC 5.5.1 (including the requirements for a *Proper Invoice*) or where the *Owner* disputes the amount claimed as payable in the *Proper Invoice*, then the *Owner* shall within 14 calendar days of receipt of the application for payment, issue a *Notice of Non-Payment*. Where the *Owner* has delivered a *Notice of Non-Payment*, as specified under this GC 5.5.3, the *Owner* and the *Contractor* shall first engage in good faith negotiations to resolve the dispute. If within 10 calendar days following the issuance of a *Notice of Non-Payment*, the *Owner* and *Contractor* cannot resolve the dispute, either party may issue a notice of *Adjudication* in a form prescribed under the *Construction Act*. The *Owner* and *Contractor* will then submit the dispute to *Adjudication* as set out under PART 8 – DISPUTE RESOLUTION.

5.5.4 The amounts disputed and described under the *Notice of Non-Payment* shall be held by the *Owner* until all disputed portions of the *Proper Invoice* for final payment have been resolved in accordance with PART 8 – DISPUTE RESOLUTION. Any portion of the *Proper Invoice* which is not the subject of a *Notice of Non-Payment* shall be payable within the time period set out in paragraph 5.5.2.2.

5.5.5 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any lien legislation applicable to the *Place of the Work*, the *Owner* shall make payment, to the *Contractor* in accordance with paragraph 5.5.2.2.

5.5.6 Notwithstanding anything else in this GC 5.5 – FINAL PAYMENT the *Owner* shall retain a finishing holdback as provided for in the *Construction Act*, which shall be released to the *Contractor* upon expiry of the lien period provided for under the *Construction Act*, provided no construction liens have been registered.

5.5.7 As additional requirements for release of finishing construction lien holdback, the *Contractor* shall submit the following documentation:

- .1 a written declaration that no claims for lien or written notices of lien have been received by it;

- .2 a Statutory Declaration in the form set out in Schedule B that all accounts for labour, subcontracts, *Products*, construction machinery and equipment, and other indebtedness which may have been incurred by the *Contractor* and for which the *Owner* might in any way be held responsible have been paid in full up to the previous progress payment, except for amounts properly retained as a holdback or as an identified amount in dispute; and
- .3 a Workplace Safety & Insurance Board Clearance Certificate.”

32. GC 5.6 DEFERRED WORK

32.1 Add new paragraph 5.6.2 as follows:

“5.6.2 Upon notice to the *Contractor*, the *Owner* may, subject to the *Owner’s* requirement to issue a *Notice of Non-Payment* under the *Construction Act*, withhold or retain all or any portion of any payment due to the *Contractor* under this *Contract* to ensure the performance of the *Work* or to protect the *Owner’s* rights in respect of the events set out in this paragraph 5.6.2, but only such portion of any payment as is reasonably necessary for such purpose. The *Owner* may make such withholding or retention upon the occurrence and continuance of any of the following events:

- .1 the *Contractor* is in default of any of its material obligations under this *Contract*;
- .2 all or any part of such payment is attributable to *Work* which is defective or not performed in accordance with the *Contract Documents*;
- .3 the *Contractor* has improperly failed to make prompt payments to its *Subcontractors* and *Suppliers* respecting *Work* for which the *Owner* has made payment to the *Contractor*; or
- .4 the amounts described in section 17(3) of the *Construction Act*.”

32.2 Add new paragraph 5.6.3 as follows:

“5.6.3 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Owner* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Owner* determines is sufficient and reasonable to cover the cost of performing such remaining work.”

32.3 Add new paragraph 5.6.4 as follows:

“5.6.4 In the event of deficiencies or delays in the *Work* that the *Contractor* fails or refuses to address upon receiving notice of same in accordance with the requirements of the *Contract*, the *Owner* may, without limiting the remedies available to it under this *Contract* and subject to the *Owner’s* requirement to issue a *Notice of Non-Payment* under the *Construction Act*, retain and set off as against any payments that would otherwise be owing to the *Contractor*, the reasonable costs of rectifying such deficiencies or delays as determined by the *Owner*.”

32.4 Add new paragraph 5.6.5 as follows:

“5.6.5 In addition to any rights the *Owner* has pursuant to the *Construction Act* and subject to the *Owner’s* requirement to issue a *Notice of Non-Payment* under the *Construction Act*, if a lien is registered against the *Place of the Work* or served upon the *Owner*, or an action commenced against the *Owner*, by any *Subcontractor*, the *Owner* having made all payments currently due in accordance with the payment terms of the *Contract Documents*, the *Owner* shall have the right to withhold from any money otherwise due to the *Contractor*, the full amount claimed in the lien action plus an additional amount sufficient to satisfy all of the *Owner* expenses relating to such lien action, including legal and consulting costs. These funds, less expenses incurred, shall be released to the *Contractor* upon the full discharge of all liens and dismissal of all actions against the *Owner*.”

33. GC 5.8 CONSTRUCTION LIENS

33.1 Add new GC 5.8 – CONSTRUCTION LIENS as follows:

“GC 5.8 – CONSTRUCTION LIENS

- 5.8.1 Notwithstanding anything else in this PART 5 – PAYMENT, in the event a claim for lien is registered against title to the *Place of the Work* by the *Contractor*, a *Subcontractor* or a *Supplier*, or served on the *Owner* with regard to the *Project* by a *Subcontractor* or a *Supplier*, or the *Owner* receives a written notice of or claim for lien from a *Subcontractor* or a *Supplier*, the *Owner* shall be entitled to withhold any payment otherwise due to the *Contractor* until such time as such claims have been dealt with as provided below.
- 5.8.2 In the event that a claim for lien or a written notice of a lien is received by the *Owner* in relation to the *Project*, the *Contractor* shall, within ten (10) calendar days, at its sole expense, arrange for the vacating or the discharge of the claim for lien and/or the withdrawal of the written notice of lien or have the lien vacated pursuant to the *Construction Act*. If the *Contractor* commences an application to the Court to have the lien vacated, the *Contractor* shall provide the *Owner* with copies of all court documents submitted by the *Contractor* and the *Order* issued by the Court. If the lien is only vacated, the *Contractor* shall, if requested, undertake the *Owner's* defence of any subsequent action commenced in the respect of the lien at the *Contractor's* expense.
- 5.8.3 If the *Contractor* fails or refuses to take such steps as required under paragraph 5.8.2, the *Owner* shall, at its option, be entitled to take all steps necessary to vacate and/or discharge the claim for lien or the withdrawal of the written notice of lien, and all costs incurred by the *Owner* in doing so (including, without limitation, legal fees on a full indemnity basis and any payment which may ultimately be made out of or pursuant to security posted to vacate the lien) shall be the responsibility of the *Contractor*, and the *Owner* may deduct such amounts from the amounts otherwise due or owing to the *Contractor*.
- 5.8.4 Without limiting any of the foregoing, the *Contractor* shall satisfy all judgments and pay all costs resulting from any liens or any actions brought by a *Subcontractor* or *Supplier* in connection with any liens, or in connection with any other claim or lawsuit brought against the *Owner* by any person that provided services or materials to the *Project* which constituted part of the *Work*, and the *Contractor* shall indemnify the *Owner* for any and all costs (including, without limitation, legal fees on a solicitor and client basis) the *Owner* may incur in connection with such claims or actions.
- 5.8.5 Section 20(1) of the *Construction Act* does not apply to this *Contract* and no general lien arises under or in respect of the *Work*, such that all liens shall arise and expire on a lot-by-lot basis.”

34. GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

34.1 Amend paragraph 6.1.2 by adding the following to the end of that paragraph:

“This requirement is of the essence and it is the express intention of the parties that any claims by the *Contractor* for a change in the *Contract Price* and/or *Contract Time* shall not be approved unless there has been compliance with PART 6 – CHANGES IN THE WORK. No course of conduct or dealing between the parties, no express or implied acceptance of alterations or additions to the *Work* and no claims that the *Owner* has been unjustly enriched by an alteration or addition to the *Work*, whether in fact there is any such unjust enrichment or not, should be the basis for a claim for additional payment under this *Contract* or a claim for any extension of the *Contract Time*.”

34.2 Add new paragraph 6.1.3 as follows:

“The *Contractor* agrees that changes resulting from construction coordination, including but not limited to site surface conditions, site coordination, and Subcontractor and Supplier coordination, are included in the *Contract Price* and shall not entitle the *Contractor* to claim an addition to the *Contract Price* in relation to coordination.”

35. GC 6.2 CHANGE ORDER

35.1 Add new paragraph 6.2.3 as follows:

“The *Contractor* shall not be entitled to any additional compensation arising out of changes to the *Work* aside from the amounts determined and agreed to under this GC 6.2, or as provided in GC 6.3 – CHANGE DIRECTIVE.

The *Contractor's* fee for overhead and profit related to a *Change Order* or *Change Directive* shall be as set out in the *Contract Documents*."

35.2 Add new paragraph 6.2.4 as follows:

"*Change Orders* are not valid and binding upon the *Owner* unless approved and executed in accordance with the *Owner's* internal approval processes."

36. GC 6.3 CHANGE DIRECTIVE

36.1 Amend paragraph 6.3.6 in the second line by adding the word "actual" before the word "cost".

36.2 Delete paragraph 6.3.6.3 in its entirety and replace it with the following:

".3 The *Contractor's* fee shall be as specified in paragraphs 6.2.3 and 6.2.4 and the *Contractor's* fee for overhead and profit shall be as set out in the *Contract Documents*."

36.3 Amend paragraph 6.3.7 by adding the word "actual" before the word "cost" in line 1.

36.4 Amend GC 6.3.7.6 by adding the following to the end of the paragraph:

", provided that such amounts are not caused by negligent acts, omissions, or default of the *Contractor* or *Subcontractor*;"

36.5 Delete GC 6.3.7.17 in its entirety including all subparagraphs.

36.6 Amend paragraph 6.3.12 by deleting the words "the adjustment shall be referred to the *Consultant* for determination" and replacing them with "the Dispute shall be resolved in accordance with Part 8 – DISPUTE RESOLUTION."

37. GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

37.1 Delete paragraph 6.4.2 in its entirety and replace it with the following:

"The *Owner* will promptly investigate such conditions. If the *Owner* determines that the conditions differ materially and would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner* will issue instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE. If the *Owner* determines that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Owner* will provide its reasons for this determination to the *Contractor* in writing."

37.2 Delete paragraph 6.4.3 in its entirety and replace it with the following:

"If the *Contractor* disputes the *Owner's* determination in paragraph 6.4.2, the *Dispute* shall be resolved in accordance with Part 8 – DISPUTE RESOLUTION."

37.3 Amend paragraph 6.4.4 by deleting the words "and GC 9.5 – MOULD" and substituting the words "GC 9.5 – MOULD and GC 9.6 – IMPACT ASSESSMENT."

37.4 Add new paragraph 6.4.5 as follows:

"The *Contractor* acknowledges that it has received the *Impact Assessment Reports* for the *Project* that are described in the RFP documents and that it has considered the mitigation measures described in the *Impact Assessment Reports* in the *Contract Price*. If the *Impact Assessment Reports* are not completed prior to the closing of the RFP submission deadline, any adjustments required to the *Contract Price* shall be determined in accordance with GC 9.6.2.3. The *Impact Assessment Reports* are provided for information only and the *Owner* shall not be liable for any errors or omissions in the reports."

37.5 Add new paragraph 6.4.6 as follows:

"The *Contractor* confirms that, prior to submitting its response to the RFP for the *Project*, it had the opportunity to carefully investigate the *Place of the Work* and applied to that investigation the degree of care and skill described

in paragraph 3.12.1, given the amount of time provided between the issue of the RFP documents and the actual submission deadline for the RFP, the degree of access provided to the *Contractor* prior to submission of the response, and the sufficiency and completeness of the information provided by the *Owner*. The *Contractor* is not entitled to compensation or to an extension of the *Contract Time* for conditions which could reasonably have been ascertained by the *Contractor* by such careful investigation undertaken prior to the submission of its response.”

38. GC 6.5 DELAYS

38.1 Delete paragraph 6.5.1 in its entirety and replace it with the following:

“If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Owner* or anyone employed or engaged by the *Owner* directly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Owner* determines. The *Contractor* shall be reimbursed by the *Owner* for its reasonable direct costs directly flowing from the delay but excluding any indirect, consequential, or special damages.”

38.2 Delete paragraph 6.5.2 in its entirety and replace it with the following:

“If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other *Authority Having Jurisdiction* on account of a breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes or the advice, recommendations and instructions of public health officials directly by the *Owner*, the *Owner's Other Contractor(s)* and relating to the *Work* or the *Place of the Work* and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, then the *Contract Time* shall be extended for such reasonable time as the *Owner* determines in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for the reasonable direct costs directly flowing from the delay but excluding any indirect, consequential, or special damages.”

38.3 Delete paragraph 6.5.3 in its entirety and replace it with the following :

“6.5.3.1 If the performance of the *Work* or the performance of any other obligation(s) of a party to this *Contract* is delayed by *Force Majeure*, then the *Contract Time* shall be extended for such reasonable time as the *Owner* and the *Contractor* shall agree. The extension of time shall not be less than the time lost as a result of the event causing the delay, unless the *Contractor* and the *Owner* agree to a shorter extension. Neither party shall be entitled to payment for its costs incurred by such delays. Upon reaching agreement on the extension of the *Contract Time* attributable to the *Force Majeure* event, the *Owner* and the *Contractor* shall execute a *Change Order* indicating the length of the extension to the *Contract Time* and confirming that there are no costs payable by either party to the other for the extension of *Contract Time*.

6.5.3.2 Notwithstanding the foregoing, the *Owner* may issue a *Change Directive* requiring the *Contractor* to undertake those specific actions identified in the *Change Directive* as the *Contractor* can reasonably and safely initiate to remove or relieve either the *Force Majeure* or its direct or indirect effects on the *Project*, in which case the *Contract Price* will be adjusted in accordance with paragraph 6.3.7. If the *Contractor* fails within the time period specified in the *Change Directive* to take such action, then the *Owner* may, at its sole and absolute discretion and after it has given *Notice in Writing* to the *Contractor*, take some or all of such actions to partially or wholly remove or relieve such *Force Majeure* or its direct or indirect effects, and thereafter require the *Contractor* to resume the performance of the *Work*.”

38.4 Delete paragraph 6.5.4 in its entirety and replace it with a new paragraph 6.5.4:

“No extension of the *Contract Time* will be approved unless the *Contractor* provides *Notice in Writing* to the *Owner* within 3 *Working Days* of the date upon which the *Contractor* ought reasonably to have been aware of the delay contemplated in paragraphs 6.5.1, 6.5.2 or 6.5.3. For the *Notice in Writing* to be valid under this paragraph 6.5.4 it must include specific details about:

- .1 the cause of the delay;
- .2 the likely impact the delay will have on the *Contract Time* and details of the extension of time being requested; and

- .3 mitigation efforts, if any, undertaken by the *Contractor* or, where no mitigation efforts have been undertaken by the *Contractor*, the reasons why mitigation is either not possible or has not been undertaken by the *Contractor*.”

38.5 Add new paragraph 6.5.6 as follows:

“6.5.6 If the *Contractor* delays the performance of the *Work* and such delay is for a cause within the *Contractor*’s control, the *Contractor* shall pay to the *Owner* the per diem rate for liquidated damages specified in Article 10 of the *Contract* for each day of delay if *Ready-for-Takeover* is not achieved in accordance with the time specified in Article A-1.3. If the per diem rate for liquidated damages is not specified in the *Contract Documents*, the *Contractor* shall pay to the *Owner* the *Administration Costs* incurred by the *Owner* as a result of the delay.”

38.6 Add new paragraph 6.5.7 as follows:

“6.5.7 If the *Contractor* is delayed in the performance of the *Work* due to the replacement of a representative, worker, *Subcontractor* or *Supplier* pursuant to GC 3.5.4, 3.6.3 or 3.7.4, the *Contractor* shall pay to the *Owner* the per diem rate for liquidated damages specified in Article 10 of the *Contract* for each day of delay if *Ready-for-Takeover* is not achieved in accordance with the time specified in Article A-1.3. If the per diem rate for liquidated damages is not specified in the *Contract Documents*, the *Contractor* shall pay to the *Owner* the *Administration Costs* incurred by the *Owner* as a result of the delay.

38.7 Add new paragraph 6.5.8 as follows:

“6.5.8 If the *Contractor* disputes the determination by the *Owner* in paragraph 6.5.1 or paragraph 6.5.2, the *Dispute* shall be resolved in accordance with Part 8 – DISPUTE RESOLUTION.”

39. GC 6.6 CLAIMS FOR A CHANGE IN THE CONTRACT PRICE

39.1 Amend paragraph 6.6.1 by deleting the words “and to the *Consultant*.”

39.2 Amend paragraphs 6.6.3 and 6.6.4 by deleting the word “*Consultant*” and replacing it with “other party.”

39.3 Delete paragraphs 6.6.5 and 6.6.6 in their entirety and replace them with the following:

“The other party, with respect to a claim made by a party under paragraph 6.6.1, shall make a determination by providing *Notice in Writing* to the claiming party within 30 *Working Days* after receipt of the claim by the other party, or within such other time period as may be agreed by the parties. If such determination is not acceptable to the claiming party, the claim shall be resolved in accordance with Part 8 – DISPUTE RESOLUTION.”

40. GC 7.1 OWNER’S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR’S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

40.1 Delete paragraph 7.1.2 in its entirety and replace it with the following:

“If the *Contractor* neglects to prosecute the *Work* properly including failing or neglecting to comply with the requirements in GC 3.5 – CONSTRUCTION SCHEDULE or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and the *Owner* determines that sufficient cause exists to justify such action, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing* that the *Contractor* is in default of the *Contractor*’s contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.”

40.2 Amend paragraph 7.1.3.1 as follows:

Insert after the word “commences” the words “and is diligently proceeding with”.

40.3 Revise paragraph 7.1.3.2 by substituting the words “an acceptable schedule” with “a schedule *Acceptable* to the *Owner*”.

40.4 Amend paragraph 7.1.4.1 by deleting the words “provided the *Consultant* has certified such cost to the *Owner* and *Contractor*”.

- 40.5 Amend paragraph 7.1.4.2 by adding to the end of the paragraph the words “and within 5 *Working Days* publish a notice of termination (form 8) in accordance with the *Construction Act*.”
- 40.6 Amend paragraph 7.1.5.3 by substituting the words “the difference” at the end of paragraph 7.1.5.3 with the words “on the expiry of the warranty period specified in paragraph 12.3.1 for that portion of the *Work* performed by the *Contractor*, provided that such payment shall be made only in accordance with the requirements set out in GC 5.5 – FINAL PAYMENT”.
- 40.7 Amend paragraph 7.1.5.4 by substituting the words “the difference” at the end of paragraph 7.1.5.4 with the words “for that portion of the *Work* performed by the *Contractor*, provided that such payment shall be made only in accordance with the requirements set out in GC 5.8 – CONSTRUCTION LIENS”.
- 40.8 Add new paragraph 7.1.7 as follows:
- “The *Owner* may, if conditions arise which make it necessary for reasons other than as provided in paragraphs 7.1.1 and 7.1.4, suspend performance of the *Work* or terminate the *Contract* by giving *Notice in Writing* to that effect to the *Contractor* identifying the reason for the suspension and the expected length of the suspension. Such suspension or termination shall be effective in the manner specified in said notice and shall be without prejudice to any claims which either party may have against the other.”
- 40.9 Add new paragraph 7.1.8 as follows:
- “The *Contractor* upon receiving notice of suspension or termination from the *Owner* shall suspend all operations as soon as reasonably possible except work which, in the *Contractor*’s opinion is necessary for the safety of personnel and for the care and preservation of the *Work*, the materials and plant. In the event of such suspension, the *Contractor* shall be reimbursed by the *Owner* for the reasonable costs incurred by the *Contractor* for such protection. Subject to any directions in the notice of suspension or termination, the *Contractor* shall discontinue ordering materials, facilities and supplies and make every reasonable effort to delay delivery of existing orders and, in the event of termination, to cancel existing orders on the best terms available.”
- 40.10 Add new paragraph 7.1.9 as follows:
- “During the period of suspension, the *Contractor* shall not remove from the *Place of the Work* any part of the *Work*, or any *Product* or materials without the consent of the *Owner*.”
- 40.11 Add new paragraph 7.1.10 as follows:
- “If the *Work* should be suspended for a period of 30 days or less, the *Contractor*, upon the expiration of the period of suspension, shall resume the performance of the *Work* in accordance with the *Contract Documents*. If the suspension was not due to an act or an omission of the *Contractor*, there shall be an equitable adjustment to the *Contract Time* and the *Contract Price* as agreed upon by the *Owner* and the *Contractor*.”
- 40.12 Add new paragraph 7.1.11 as follows:
- “If, after 30 days from the date of notice of suspension of the *Work* the *Owner* and the *Contractor* agree to continue with and complete the *Work*, the *Contractor* shall resume operations and complete the *Work* in accordance with the terms and conditions agreed upon by the *Owner* and the *Contractor*.”
- 40.13 Add new paragraph 7.1.12 as follows:
- “The *Owner* may terminate this *Contract* at any time for any or no reason. Such termination shall be effective upon the date specified in the *Owner*’s *Notice in Writing* advising of the termination of the *Contract* pursuant to this paragraph 7.1.12. In such event, the *Owner* shall pay for the actual and verifiable *Work* performed up to the effective date of termination, including demobilization costs, and for such additional costs, if any, directly flowing from and which are a reasonable consequence of the termination, but excluding any consequential, indirect or special damages, termination fees, penalties or levies, and any claims for loss of profit, lost deposits, or lost opportunity. The *Owner* shall not be liable to the *Contractor* for any other claims, costs or damages whatsoever arising from such termination of the *Contract*. Within 3 *Working Days* of termination by the *Owner*, the *Contractor* shall deliver a *Notice in Writing* to each of its *Subcontractors* and *Suppliers* confirming the effective date of the termination.”

41. GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

41.1 Amend paragraph 7.2.1 by adding to the end of the paragraph the words "and within 5 *Working Days* publish a notice of termination (form 8) in accordance with the *Construction Act*."

41.2 Amend paragraph 7.2.2, by:

(i) adding the following after the words "public authority" in the second line:

"on account of a breach, violation, contravention, or a failure to abide by any laws, ordinances, rules, regulations, or codes of *Authorities Having Jurisdiction*, directly by the *Owner* or the *Owner's Other Contractor(s)* and relating to the *Work* or the *Place of the Work*,"; and,

(ii) adding the following to the end of the paragraph:

"unless an acceptable arrangement for an extension of the *Contract Time* is agreed to by the *Contractor* and the *Owner*."

41.3 Delete paragraphs 7.2.3.1 and 7.2.3.2 in their entirety and replace them with "Intentionally left blank".

41.4 Delete paragraph 7.2.3.3 in its entirety and replace it with a new paragraph 7.2.3.3:

".3 the *Owner* fails to pay the *Contractor* when due the amount certified by the *Owner* or awarded by arbitration or a Court, except where the *Owner* has a bona fide claim for set off; or"

41.5 Amend paragraph 7.2.3.4 by deleting all the words after "degree" and replacing them with "and the *Contractor* confirms by a detailed *Notice in Writing* to the *Owner* that sufficient cause exists. Such detailed written statement must contain particulars, including references to the *Contract Documents*, and supporting documentation demonstrating the alleged default by the *Owner*."

41.6 Amend paragraph 7.2.4 by adding to the end of the paragraph the words "and within 5 *Working Days* publish a notice of termination (form 8) in accordance with the *Construction Act*."

41.7 Delete 7.2.5 in its entirety and replace it with the following:

"If the *Contractor* terminates the *Contract* under the conditions described in this GC 7.2, the Contractor shall be entitled to be paid for all *Work* performed to the date of termination. The *Contractor* shall also be entitled to recover the costs associated with termination, including the costs of demobilization, losses sustained on *Products* and construction machinery and equipment. The *Contractor* shall not be entitled to any recovery for any indirect, special or consequential losses."

42. GC 8.1 AUTHORITY OF THE CONSULTANT

42.1 Amend paragraph 8.1.1 by deleting the words "which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT."

42.2 Delete paragraph 8.1.2 in its entirety.

43. GC 8.2 ADJUDICATION

43.1 Delete GC 8.2 – ADJUDICATION in its entirety, including all subparagraphs thereunder.

44. GC 8.3 NEGOTIATION, MEDIATION, ARBITRATION AND ADJUDICATION

44.1 Delete GC 8.3 – NEGOTIATION, MEDIATION, AND ARBITRATION, including all paragraphs thereunder and replace it with the following:

"GC 8.3 – NEGOTIATION, MEDIATION, ARBITRATION AND ADJUDICATION

"8.3.1 Save and except where the *Contractor* has given an undertaking, in accordance with the *Construction Act*, to refer a dispute to *Adjudication*, prior to delivering a notice of *Adjudication* in a form prescribed by the *Construction Act*, the parties agree to first address all *Disputes* in a tiered approach as follows:

- .1 A *Dispute* shall be referred to the *Owner's* project manager for the *Project* and a representative of the *Contractor* of the equivalent seniority or position for resolution within a period not to exceed thirty (30) days.
 - .2 If unresolved, after following the process described in paragraph 8.3.1.1, the *Dispute* shall be referred to the *Owner's* Director or Vice President who is responsible for the *Project* and an employee of the *Contractor* of the equivalent seniority or position for resolution within a period not to exceed thirty (30) days.
 - .3 If unresolved after following the process described in paragraph 8.3.1.3, and only at the election of the *Owner*, the *Dispute* shall be referred to the President and CEO of the *Owner* and the most senior executive employee of the *Contractor* for resolution within a period not to exceed thirty (30) days. If the *Owner* does not elect, at its sole option, to proceed under this paragraph 8.3.1.3, the *Dispute* may proceed to under either step as described in paragraphs 8.3.2 or 8.3.3.
- 8.3.2 If the *Dispute* remains unresolved despite the *Parties'* attempting to resolve it following the process in paragraph 8.3.1, a party may elect to proceed with the *Dispute* by way of an *Adjudication*. If a party elects to proceed by way of an *Adjudication*, the other party shall not be bound to proceed by way of an *Adjudication*, save and except where the parties are obliged under the *Construction Act*. The following procedures shall apply to any *Adjudications* the parties engage in under the *Construction Act*:
- .1 any hearings shall be held in the offices of the *Owner*, or, if such offices are unavailable, another venue as the parties may agree and which is acceptable to the adjudicator;
 - .2 the *Adjudication* shall be conducted in English;
 - .3 each party may be represented by counsel throughout an *Adjudication*;
 - .4 there shall not be any oral communications with respect to issues in dispute that are the subject of an *Adjudication* between a party and the adjudicator unless it is made in the presence of both parties or their legal representatives; and
 - .5 a copy of all written communications between the adjudicator and a party shall be given to the other party at the same time.
- 8.3.3 Any documents or information disclosed by the parties during an *Adjudication* are confidential and the parties shall not use such documents or information for any purpose other than the *Adjudication* in which they are disclosed and shall not disclose such documents and information to any third party, unless otherwise required by law, save and except the adjudicator.
- 8.3.4 In respect of any claim or dispute, if the *Contractor* fails to comply with any of the notice requirements set out in the *Contract Documents* then the *Contractor* shall be barred from advancing such claim(s) or dispute(s) and shall have no entitlement whatsoever in respect of such claim(s) or dispute(s) (including to an increase in payment under the *Contract*, or an extension of *Contract Time*) and by failing to comply with the notice requirements waives the right to make any such claim(s) or dispute(s) in an *Adjudication* or in any other form of dispute resolution available under this *Contract* or at law. This GC 8.3.4 shall operate conclusively as an estoppel and bar in the event such claims or disputes are brought in an *Adjudication* or other form of dispute resolution and the *Owner* may rely on this GC 8.3.4 as a complete defence to any such claims or disputes.
- 8.3.5 The parties hereby acknowledge and agree:
- .1 that counterclaims, claims of set-off or the exercise or use of other contractual rights that permit the *Owner* to withhold, deduct or retain from monies otherwise owed to the *Contractor* under the *Contract* may be referred to, and included as part of, *Adjudications* under the *Construction Act*;
 - .2 that disputes related to the termination or abandonment of the *Contract*, as well as any disputes that arise or are advanced following the termination or abandonment of the *Contract*, shall not be referred to *Adjudication* under the *Construction Act*;
 - .3 that notice(s) of *Adjudication*, with respect to any dispute or claim relating to the *Project*, shall not be given, and no *Adjudication* shall be commenced following *Ready-for-Takeover*, abandonment, or termination of the *Contract*;

- .4 that any *Adjudication* between the *Contractor* and a *Subcontractor* or a *Supplier* that relates to an *Adjudication* between the *Owner* and the *Contractor* shall be joined together to be adjudicated by a single adjudicator, provided that the adjudicator agrees to do so, and the *Contractor* shall include a provision in each of its subcontracts that contain an equivalent obligation to this GC 8.3.5.4; and
- .5 that, other than where the *Contractor* is obliged to commence an *Adjudication* pursuant to an undertaking under the *Construction Act*, neither the *Owner* nor the *Contractor* shall commence an *Adjudication* during the *Restricted Period (Adjudication)*.

8.3.6 If the *Dispute* remains unresolved despite the parties attempting to resolve it following the process in paragraph 8.3.1, or following a determination of the *Dispute* pursuant to an *Adjudication* under paragraph 8.3.2, a party may elect to proceed with the *Dispute* under a mediation model to be agreed upon by the parties. A party shall elect to proceed to mediation no later than: (i) ten (10) days following the expiry of the timeline set out in paragraphs 8.3.1.2 or 8.3.1.3, whichever is the later, or (ii) ten (10) days following the rendering of the adjudicator's determination following an *Adjudication*. Where a party elects to proceed with mediation within the timelines prescribed in this paragraph 8.3.6, the other party shall be bound to proceed to mediation. No later than ten (10) days after a party makes an election to proceed to mediation, or such longer period as may be mutually agreed between the parties, the parties shall enter into a mediation agreement which shall set out the mediation process and designate the mediator.

8.3.7 If neither party elects to proceed to mediation within the timelines outlined in paragraph 8.3.5 or 8.3.6, or the parties are unable to enter into a mediation agreement within the time limits, the matter shall proceed and be finally resolved by binding arbitration by a single arbitrator in accordance with the *Arbitration Act* by an arbitration agreement to be executed by the parties and the arbitrator. The parties shall mutually agree on the selection of the arbitrator, failing which the arbitrator shall be appointed in accordance with the *Arbitration Act*. The arbitration proceedings shall take place in Toronto, Ontario, Canada. The language of the arbitration shall be English. The parties agree that any arbitration award, including with respect to costs, shall be binding on the parties, may be enforced in any court of competent jurisdiction and shall be final and no appeals or judicial reviews shall be permitted as of right or by application to any court of competent jurisdiction, except on errors of law. The parties shall each bear their own costs and their proportionate share of any joint costs of arbitration, subject to any award of an arbitrator.

8.3.8 The timelines in GC 8.3. may be amended by mutual agreement of the parties.”

45. GC 8.4 RETENTION OF RIGHTS

45.1 Add new paragraph 8.4.3 as follows:

“8.4.3 If the *Owner* gives the notice in writing described in paragraph 8.3.6 to have a dispute resolved by arbitration, the *Contractor* agrees that this paragraph 8.4.3 shall be construed as a formal consent to the stay of any lien proceedings until an award is rendered in the arbitration or such dispute as otherwise resolved between the parties. In no event shall the *Contractor* be deprived of its right to enforce its lien against the *Project* should the *Owner* fail to satisfy any arbitral award against it in full on the dispute in respect of which the lien proceedings were commenced. Provided nothing in this paragraph 8.4.3 shall prevent the *Contractor* from taking the steps required by the *Construction Act* to preserve and/or perfect a lien to which it may be entitled.”

46. GC 9.1 PROTECTION OF WORK AND PROPERTY

Amend paragraph 9.1.1.1 by adding the following words at the end of that paragraph:

“...which the *Contractor* could not reasonably have discovered applying the degree of care and skill described in paragraph 3.4.1 to its review of the *Contract Documents*.”

46.1 Delete paragraph 9.1.2 in its entirety and replace it with the following new paragraph 9.1.2:

“Before commencing any work, the *Contractor* shall determine the locations of all underground utilities and structures indicated in the *Contract Documents* or that are discoverable by applying to an inspection of the *Place of Work* the degree of care and skill described in paragraph 3.12.1.”

46.2 Add new paragraph 9.1.5 as follows:

“The *Contractor* shall neither undertake to repair and/or replace any damage whatsoever to the work of *Other Contractors*, or to adjoining property, nor acknowledge the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from the *Owner*. However, where there is danger to life or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger.”

47. GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

47.1 Amend paragraph 9.2.7.3 by deleting the words “*Consultant* may recommend in consultation with the *Contractor* and” and replacing them with the words “*Owner* may determine in consultation with”.

47.2 Add new paragraph 9.2.10 as follows:

“The *Contractor* shall indemnify and hold harmless the *Owner*, their agents and employees from and against claims, demands, losses, costs, damages, actions, suits or proceedings arising out of or resulting from exposure to, or the presence of, toxic or hazardous substances or materials which were either brought on to the *Place of the Work* by the *Contractor*, or anyone for whom the *Contractor* is in law responsible, and mishandled or handled negligently or improperly or which are otherwise mishandled or handled negligently or improperly by the *Contractor*, or anyone for whom the *Contractor* is in law responsible, thereby creating exposure to toxic or hazardous substances or materials. This obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity set out in GC 13.1 – INDEMNIFICATION or elsewhere in the *Contract* or which otherwise exist respecting a person or party described in this paragraph.”

48. GC 9.4 CONSTRUCTION SAFETY

48.1 Delete paragraph 9.4.1 in its entirety and replace it with the following:

“9.4.1 The *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*. Without limiting the generality of the foregoing, the *Contractor* shall comply with the occupational health and safety laws and regulations and any orders, recommendations and restrictions made by the federal, provincial or municipal governments and the advice, recommendations and instructions of public health officials, as they apply to the *Place of the Work*. If the *Place of the Work* is located on the *Owner's* premises, the *Contractor* shall comply with all the *Owner's* policies and directions to ensure the health and safety of the *Owner's* employees and *Other Contractors* as well as the *Contractor's* employees, *Subcontractors* and *Suppliers*. The *Contractor* shall submit its Health and Safety Plan to the *Owner* for *Acceptance* prior to commencing the *Work*, which Plan shall include all the elements required by the *Specifications* for a Health and Safety Plan. The *Contractor* shall indemnify and hold harmless the *Owner* for any fines, penalties or other costs imposed or assessed on or incurred by the *Owner* arising from the *Contractor's* failure to comply with the applicable health and safety laws, any orders, recommendations and restrictions of the federal, provincial or municipal governments or the advice, recommendations and instructions of public health officials. ”

48.2 Amend GC 9.4.2 by adding the following words after “and the *Contractor*”:

“, *Subcontractors* and *Suppliers*”.

48.3 Amend GC 9.4.3 by adding the following words after “and the *Contractor*”:

“, *Subcontractors* and *Suppliers*”.

48.4 Delete paragraph 9.4.4 in its entirety and replace it with the following:

“9.4.4 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- .1 a current WSIB clearance certificate;
- .2 copies of the *Contractor's* insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;
- .3 documentation of the *Contractor's* in-house safety-related programs; and

- .4 a copy of the Notice of Project filed with the Ministry of Labour naming itself as “Constructor” under the *Occupational Health and Safety Act*.”

48.5 Delete paragraph 9.4.5 in its entirety and replace it with the following:

“9.4.5 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, officers, directors, employees, consultants, successors and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the *Occupational Health and Safety Act* and any breaches of the *Emergency Management and Civil Protection Act* and related orders, recommendations or regulations, including the payment of legal fees and disbursements on a full indemnity basis.”

48.6 Add new paragraph 9.4.6 as follows:

“9.4.6 The *Contractor* shall ensure that it and its employees, *Subcontractors* and *Suppliers* are aware of and, while being on the *Owner’s* property, comply with the *Owner’s* policies, including its Fit for Duty Policy, and with the Ontario Northland Operating Manual, including the Current Summary Bulletin, current Ontario Northland Time Table, C.R.O.R. 2022, Infrastructure Special Instructions, Dangerous Goods and Ontario Northland General Operating Instructions, as applicable.”

48.7 Add new paragraph 9.4.7 as follows:

“9.4.7 In the event of an emergency threatening health, life or property, the *Contractor* shall take such action as may be necessary to save lives and protect persons from injury and to protect and preserve the property. The *Contractor* shall notify the *Owner* of such emergency as promptly as is practical under the circumstances.”

49. GC 9.5 MOULD

49.1 Amend paragraph 9.5.3.3 by deleting the words “*Consultant* may recommend in consultation with the *Contractor* and” and replacing them with the words “*Owner* may determine in consultation with”.

50. GC 9.6 IMPACT ASSESSMENT

50.1 Add new GC 9.6 – IMPACT ASSESSMENT as follows:

“GC 9.6 IMPACT ASSESSMENT

9.6.1 The *Contractor* shall be responsible for:

- .1 ensuring that any potential impacts and areas of concern identified in the *Contract Documents* or *Impact Assessment Reports*, if provided, are mitigated during the *Work*; and,
- .2 identifying any previously unknown impacts relating to fish, navigable waters, species at risk, vegetation, wildlife, socio-economic and heritage that arise prior to commencing the *Work* and during the *Work*.

9.6.2 If the *Contractor* or *Owner* observes or reasonably suspects the presence of any impacts described in paragraph 9.6.1.2 that are not mentioned or accounted for in the *Contract Documents* or *Impact Assessment Reports*, if any, and related mitigation plans,

- .1 the observing party shall immediately report the circumstances to the other party;
- .3 the *Contractor* shall immediately take reasonable steps, including stopping the *Work* if necessary, to ensure that any potential impacts are mitigated; and,
- .4 if the *Owner* and *Contractor* do not agree on the existence, significance or mitigation measures for the impact, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine the issue and the parties will enter into a *Change Order* if the mitigation measures will cause an increase or decrease in the *Contractor’s* cost or time to perform the *Work*.

9.6.3 If the *Contractor* fails to comply with the requirements in paragraph 9.6.2, the *Contractor* shall:

- .1 be responsible for all costs incurred by the *Owner* or the *Contractor* to mitigate the damage caused due to the failure;
- .5 not be entitled to request a *Change Order* relating to the failure to comply; and
- .6 indemnify the *Owner* and hold it harmless from any claims, damages, costs, fines or other expenses, including reasonable legal fees and expenses, relating to or arising from the *Contractor's* failure to comply with paragraph 9.6.2.”

51. GC 9.7 ENVIRONMENTAL PROTECTION FOR CONSTRUCTION IN AND AROUND WATERBODIES

51.1 Add new GC 9.7 – ENVIRONMENTAL PROTECTION FOR CONSTRUCTION IN AND AROUND WATERBODIES as follows:

“GC 9.7 ENVIRONMENTAL PROTECTION FOR CONSTRUCTION IN AND AROUND WATERBODIES

- 9.7.1 The *Contractor* shall comply with the environmental protection requirements and mitigation measures that apply to construction involving work in and around waterbodies and on waterbody banks as set out in OPSS.PROV 182.
- 9.7.2 Pursuant to section 38(4) of the *Fisheries Act*, the *Contractor* has an obligation to notify the Department of Fisheries & Oceans (“DFO”) when the *Work* results in the unauthorized death of fish or a harmful alteration, disruption or destruction (“HADD”) of fish habitat or where there is imminent danger that the death of fish or HADD of fish habitat could occur. The notification shall be done using the form attached as Schedule D. The *Contractor* shall also notify the *Owner* of any such incidents. Failure to notify DFO of such incidents is a federal offence.
- 9.7.3 In accordance with the *Fisheries Act*, notification must be made without delay to DFO after the *Contractor* ensures the immediate health and safety risks are managed at the *Place of the Work*. Updates to DFO may be provided at a later time, if required.
- 9.7.4 All spills and sediment releases into a waterbody during the *Work* must be immediately reported by the *Contractor* to the *Consultant* and the *Owner* who must report the release to the Spills Action Centre (“SAC”) operated by the Ministry of Environment, Conservation and Parks (“MECP”) at 800-288-6060. If the *Owner* is not available, the *Contractor* shall report the incident to SAC. The *Contractor* shall take all reasonable measures to mitigate or remedy any adverse effects that result from the occurrence or might reasonably be expected to result from it.”

52. GC 9.8 ENVIRONMENTAL SPILLS AND RELEASES

52.1 Add new GC 9.8 – ENVIRONMENTAL SPILLS AND RELEASES as follows:

“GC 9.8 ENVIRONMENTAL SPILLS AND RELEASES

- 9.8.1 All spills and releases of hazardous substances in the course of the *Work* must be immediately reported by the *Contractor* to the *Owner* who will report the spill or release to the MOECP SAC. If the the *Owner* is not available, the *Contractor* shall report the incident to the MOECP SAC and the ONTC RTC at 800-558-4129 or EXT 141.
- 9.8.2 The *Contractor* shall take immediate steps to mitigate the damage to the environment and contain the spill or release. If the *Contractor* does not take timely action or, if the *Contractor* is not available, the *Owner* may direct others to remedy the situation.
- 9.8.3 If the spill or release was the fault of the *Contractor*, the remedial work shall be completed at the cost of the *Contractor* and with no additional cost to the *Owner* and the *Owner* shall be entitled to seek reimbursements for all costs associated with the remedial work including the cost of work done by third parties.
- 9.8.4 If the spill or release was not the fault of the *Contractor*, the *Owner* shall pay for the remedial work.”

53. GC 10.1 TAXES AND DUTIES

53.1 Amend paragraph 10.1.2 by adding the following sentence at the end of that paragraph:

“For greater certainty, the *Contractor* shall not be entitled to any mark up for overhead or profit on any increase in such taxes and duties and the *Owner* shall not be entitled to any credit relating to mark up for overhead or profit on any decrease in such taxes.”

53.2 Add new paragraph 10.1.3 as follows:

“Where an exemption or a recovery of sales taxes, customs duties, excise taxes or *Value Added Taxes*, rebates, or monies from incentive programs is applicable to the *Contract*, the *Contractor* shall, at the request of the *Owner*, assist, join in, or make application for any exemption, recovery or refund of all such taxes, duties, rebates and incentives and all amounts recovered or exemptions obtained shall be for the sole benefit of the *Owner*. The *Contractor* agrees to endorse over the *Owner* any cheques received from the federal or provincial governments, or any other *Authority Having Jurisdiction*, as may be required to give effect to this paragraph 10.1.3.”

53.3 Add new paragraph 10.1.4 as follows:

“The *Contractor* shall maintain accurate records tabulating equipment, material and component costs reflecting the taxes, customs duties, excise taxes and *Value Added Taxes paid*.”

53.4 Add new paragraph 10.1.5 as follows:

“Any refund of taxes, including without limitation, any government sales tax, customs duty, excise tax or *Value Added Tax*, whether or not paid, which is found to be inapplicable or for which exemption may be obtained, is the sole and exclusive property of the *Owner*.”

53.5 Add new paragraph 10.1.6 as follows:

“The *Contractor* agrees to cooperate with the *Owner* and to obtain from all *Subcontractors* and *Suppliers* cooperation with the *Owner* in the application for any rebates, incentives or refund or exemption of any taxes, which cooperation shall include, but not be limited to, making or concurring in the making of an application for any such rebates, incentives, refund or exemption and providing to the *Owner* copies, or where required, originals of records, invoices, purchase orders and other documentation necessary to support such applications. All such rebates, incentives or refunds shall either be paid to the *Owner*, or shall be a credit to the *Owner* against the *Contract Price*, in the *Owner’s* discretion.”

53.6 Add new paragraph 10.1.7 as follows:

“Customs duties penalties, or any other penalty, fine or assessment levied against the *Contractor* shall not be treated as a tax or customs duty for purposes of this GC 10.1.”

54. GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

54.1 Delete paragraph 10.2.2 in its entirety and replace it with the following:

“The *Owner* has Crown immunity from the *Building Code Act* and the *Planning Act* and will not be obtaining building permits or development approvals. The *Owner* shall obtain and pay for any permanent easements over Third Party Property required for the completion of the Work. The *Contractor* shall be responsible for all other permissions for access to Third Party Property.”

54.2 Add to the end of paragraph 10.2.4. the following:

“Whenever standards of law, ordinances, rules, regulations, codes and orders relating to the *Work* differ, the most stringent standards shall govern.”

54.3 Amend paragraph 10.2.5 by adding the words, “Subject to paragraph 3.4.1” to the beginning of the paragraph.

- and -

Substitute the word “*Owner*” for the word “*Consultant*”

-and-

Add the following to the end of the second sentence:

“...and no further *Work* on the affected components of the *Contract* shall proceed until these changes to the *Contract Documents* have been obtained by the *Contractor* from the *Owner*.”

54.4 Amend paragraph 10.2.6 by adding the following sentence at the end of that paragraph:

“In the event the *Owner* suffers loss or damage as a result of the *Contractor*’s failure to comply with paragraph 10.2.5, and notwithstanding any limitations described in paragraph 13.1.1, the *Contractor* agrees to indemnify and to hold harmless the *Owner* from and against any claims, demands, losses, costs, damages, actions, suits or proceedings resulting from such failure by the *Contractor*.”

54.5 Amend paragraph 10.2.7 by adding the words “which changes were not, or could not have reasonably been known to the *Owner* or the *Contractor*, as applicable, at the time of deadline for submission of responses to the RFP and which changes did not arise as a result of a public emergency or other *Force Majeure* event” to the second line, after the words “authorities having jurisdiction”.

54.6 Add new paragraph 10.2.8 as follows:

“The *Contractor* shall furnish necessary certificates as evidence that the *Work* installed conforms with laws and regulations of authorities having jurisdiction, including certificates of compliance for *Owner*’s occupancy or partial occupancy. These certificates are to be final certificates giving complete clearance of the *Work*.”

55. GC 10.3 PATENT FEES

41.1 Delete paragraph 10.3.2 in its entirety.

56. GC 10.4 WORKERS’ COMPENSATION

56.1 Add new paragraph 10.4.2 as follows:

“10.4.2 The Contractor shall be solely responsible for its employees and officers and for its Subcontractors and their officers and employees, including ensuring that all required employer filings, contributions, deductions, and payments are made or remitted, as the case may be, with respect to applicable employer health taxes and under the *Employment Insurance Act*, the Canada Pension Plan, the Ontario *Workplace Safety and Insurance Act, 1997*, and all equivalent legislation in any other applicable jurisdiction. Without limiting the generality of the foregoing, the *Contractor* shall indemnify, defend and hold harmless the *Owner*, its directors, officers, and employees from all claims, demands, actions, suits or proceedings arising from any health, medical, disability or similar claims which *Contractor*’s employees or officers or any of its *Subcontractors* or their officers or employees may make against the *Owner*, its directors, officers, or employees during or after the *Contract Time*, whether or not such claims are attributable to the *Contractor*’s or *Subcontractor*’s performance of the *Work* or related to the *Contractor*’s obligations under this *Contract*.”

57. GC 11.1 INSURANCE

57.1 Delete all references to “the *Consultant*” in GC 11.1.

57.2 Amend the title of GC 11 to add the words “CONTRACT SECURITY” at the end of the title.

57.3 Delete items 1 to 8 in paragraph 11.1.1 and in CCDC 41 and replace with the following:

1. General Liability insurance shall be with limits of not less than \$10,000,000 per occurrence, an aggregate limit of not less than \$10,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$50,000. To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 (including an extension for a standard provincial and territorial form of non-owned automobile liability policy) and IBC Form 2320 including but not limited to:

- .1 Bodily injury, death, and property damage including loss of use thereof.
- .2 Premises and operations liability.
- .3 Products and completed operations liability.
- .4 Blanket contractual liability.
- .5 Cross liability and severability of interest clauses.
- .6 Contingent employer's liability.
- .7 Personal injury liability.
- .8 Owner's and Contractor's protective coverage.
- .9 Broad form property damage.
- .10 Elevator and hoist liability.
- .11 Liability for attached machinery, including loading and unloading.
- .12 Extension of coverage shoring; blasting; excavation; underpinning; demolition; on work; below ground surface work, including tunneling and grading, if applicable to the Project.

The General Liability Insurance shall not include any exclusion relating to working in the vicinity of railway operations.”

2. Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$5,000,000 inclusive per occurrence for bodily injury, death, and damage to property, covering all vehicles owned or leased by the *Contractor*.
3. Manned Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft (if used directly or indirectly in the performance of the *Work*), including use of additional premises, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$10,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*.
4. Unmanned aerial vehicle liability insurance with respect to owned or non-owned aircraft (if used directly or indirectly in the performance of the *Work*), shall have limits of not less than \$5,000,000 per occurrence or accident for bodily injury, death and damage to property or such amounts as required by any applicable law or regulation.
5. Contractors' equipment insurance coverage written on an “all risks” basis covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, shall be in a form Acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* may agree to waive the equipment insurance requirement.
6. Professional liability Insurance. This policy shall cover risks of errors, omissions or negligent acts in the performance of professional services for the *Project*. The Named Insureds are to be approved and accepted for coverage by the Insurer. This policy shall provide for a limit of liability of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate (inclusive of defence costs and expenses).
7. Technology Liability Insurance for financial loss arising out of an error, omission, or negligent act in the rendering of services in an amount not less than **\$5,000,000** per claim and **\$5,000,000** aggregate. Such policy shall be on a claims made basis and shall provide coverage for damages and defense costs. The Technology Professional Liability policy will also include an insuring agreement for cyber or network security and privacy liability insurance, covering financial loss arising out of actual or potential unauthorized access, unauthorized use, and a failure to protect confidential information which results in loss or misappropriation of such information in both electronic and non-electronic format. Such insurance will have a limit of an amount not less than \$5,000,000 per claim and \$5,000,000 aggregate. The *Contractor* shall maintain said liability coverage in place for a three-year period after termination of the *Contract* by way of annual policy renewal, or purchase of extended reporting period.
8. “All Risks” Builders Risk and Boiler & Machinery Insurance shall have limits of not less than the sum of 1.1 times *Contract Price*, plus any property, including design services, the *Owner* provides for incorporation into the *Work*. This policy shall cover all risks of direct physical loss or damage to the *Project*, including but not limited to the perils of earthquake and flood, subject to policy sub limits, warranties and exclusions and shall not be less than the insurance provided by IBC Forms 4042 and 4047 or their equivalent replacement. This insurance shall cover all property forming part of the *Project*, and goods and materials to be incorporated in the *Project* while at the *Place of the Work*, in transit, or while in off-site storage. It shall not provide coverage for the *Contractor's* or

Subcontractors' equipment other than scaffolding, formwork, fences, shoring, hoarding, falsework, tarpaulins and temporary buildings in connection with the *Work*. The insurance shall not have a deductible greater than \$50,000.

9. Pollution Liability Insurance for an amount not less than \$5,000,000 per occurrence and in the aggregate and a deductible of not more than \$50,000. This policy shall be written on either an Occurrence or Claims Made Form and will provide coverage on a sudden and accidental, and gradual pollution events basis for on-site cleanup and remediation as well as on-site and off-site third party claims for bodily injury and property damage, cleanup and remediation.

58. GC 11.2 CONTRACT SECURITY

58.1 Add new GC 11.2 – CONTRACT SECURITY as follows:

"GC 11.2 CONTRACT SECURITY

- 11.2.1 The *Contractor* shall provide a performance bond and a labour and materials payment bond, each issued by a bonding company acceptable to *Owner* and licensed to issue such instruments in the *Place of the Work*, in the amounts and forms as follows:
 - .1 Amount of performance bond shall be equal to not less than 50% of the *Contract Price* in the form prescribed by the *Construction Act*.
 - .2 Amount of labour and material payment bond shall be equal to not less than 50% of the *Contract Price* in the form prescribed by the *Construction Act*.
- 11.2.2 The bonds provided in accordance with paragraph 11.2.1 shall guarantee the faithful performance of the *Contract* in accordance with the *Contract Documents*, including the requirements for warranties provided for the GC 12.3 – WARRANTY, and the payment of all obligations incurred in the event of the *Contractor's* default, including but not limited to the following:
 - .1 the payment of legal, accounting, architectural, engineering and other professional services expenses incurred by the *Owner* in determining the extent of *Work* executed and any additional *Work* required as a result of the interruption of the *Work*, and its completion; and
 - .2 the payment of additional expenses to the *Owner* in the form of security guard services, light, heat, power, loss of use of premises, and other related costs, payable over the period between the default of the *Contract* and completion of the *Work*.
- 11.2.3 Without limiting the foregoing in any way, the bonds shall indemnify and hold harmless the *Owner* for and against costs and expenses (including legal and consultant services and court costs) arising out of or as a consequence of any default of the *Contractor* under this *Contract*.
- 11.2.4 The *Contractor* shall be responsible for notifying the surety company of any changes made to the *Contract Documents* or the *Contract Price* during the course of the *Work*.
- 11.2.5 The premiums for bonds required by the *Contract Documents* shall be included in the *Contract Price*.
- 11.2.6 Should the *Owner* require additional bonds by the *Contractor* or any of his *Subcontractors*, after the receipt of bids for the *Work*, the *Contract Price* shall be increased by the actual costs attributable to providing such bonds. The *Contractor* shall promptly provide the *Owner* with any such bonds that may be required."

59. GC 12.1 READY-FOR-TAKEOVER

59.1 Delete GC 12.1.1 in its entirety and replace it with the following:

- "12.1.1 *Ready-for-Takeover* shall be achieved when all of the following has occurred, as verified and *Accepted* by the *Owner*:
 - .1 *Substantial Performance of the Work* has been achieved, as verified by the *Owner*;
 - .2 the appropriate permits (if any) for the *Place of the Work* have been obtained from the authorities having

jurisdiction;

- .3 the *Work* to be performed under the *Contract* has satisfied the requirements for deemed completion in accordance with Section 2(3) of the *Construction Act*,
- .4 final cleaning and waste removal, as required by the *Contract Documents*;
- .5 the *Contractor* has delivered to the *Owner* all inspection certificates from authorities having jurisdiction with respect to any component of the *Work* which has been completed;
- .6 subject only to GC 12.1.2, the entire *Work* has been completed to the requirements of the *Contract Documents*, including completion of all items on the punch list prepared at the time of *Substantial Performance of the Work* and the *Work* is being used for its intended purpose, and is so certified by the *Consultant*;
- .7 subject only to GC 12.1.2, the *Contractor* has submitted to the *Owner* in a collated and organized matter, all *Close-Out Documentation* and any other materials or documentation required by the *Contract Documents*;
- .8 subject only to GC 12.1.2, all *Products*, systems and components of the *Project* have been commissioned and certified for operation and accepted by the *Owner*, and
- .9 subject only to GC 12.1.2, the *Contractor* has submitted to the *Owner* full and complete *As-built Record Drawings* and *Specifications* revised by the *Contractor* to reflect the as-built state of the *Work*, clearly showing changes to the *Drawings* and *Specifications* from the original *Contract Documents*, all of which have been *Accepted* by the *Owner* acting reasonably.”

59.2 Delete GC 12.1.2 in its entirety and replace it with the following:

“12.1.2 The *Owner* may, in its sole, absolute, and unfettered discretion, waive compliance with a requirement, or a part thereof, for achieving *Ready-for-Takeover* set out in GC 12.1.1.6 to 12.1.1.9 (inclusive). Where the *Owner* exercises the discretion afforded under this GC 12.1.2, the *Contractor* shall be required to comply with GC 5.5.1.3 as part of its application for final payment and the *Owner* and the *Contractor* shall establish a reasonable date for completing the *Work*.”

59.3 Delete GC 12.1.3 in its entirety and replace it with the following:

“12.1.3 When the *Contractor* considers the *Work* has attained *Ready-for-Takeover*, it shall submit a written application to the *Owner* for review.”

59.4 In GC 12.1.4, delete the words “list and” from the second line.

59.5 Delete GC 12.1.5 in its entirety and replace it with the following:

“12.1.5 Following the confirmation of the date of *Ready-for-Takeover* by the *Owner*, the *Contractor* may submit a final application for payment in accordance with GC 5.5 – FINAL PAYMENT.”

59.6 Delete GC 12.1.6 in its entirety.

60. GC 12.2 EARLY OCCUPANCY BY THE OWNER

60.1 Delete GC 12.2 – EARLY OCCUPANCY BY THE OWNER in its entirety.

61. GC 12.3 WARRANTY

61.1 Amend paragraph 12.3.2 by adding the words, “Subject to paragraph 1.1.3....” at the beginning of that paragraph.

61.2 Delete paragraphs 12.3.4, and 12.3.5 and replace it with the following paragraphs:

“12.3.4 The *Contractor* shall correct, at no additional cost to the *Owner*, defects or deficiencies in the *Work* that appear, prior to and during the *Warranty Period*. Any *Work* repaired or replaced during the *Warranty Period* shall be re-warranted for an additional 12 months from the date of completion of the repair or

replacement. Notwithstanding the expiration of the *Warranty Period*, the *Contractor* shall not be relieved of its obligations to correct any defects or deficiencies in the *Work* of which *Notice in Writing* has been given to the *Contractor* prior to the expiration of the *Warranty Period*.

12.3.5 The *Owner* shall provide *Notice in Writing* to the *Contractor* of defects and deficiencies in the *Work* discovered during the *Warranty Period*. The *Contractor* shall submit a remediation plan for the permanent rectification of the defects and deficiencies within 2 *Working Days* after delivery of the *Notice in Writing*, including the schedule for the remediation work to be completed. Upon *Acceptance* by the *Owner* of the remediation plan, the *Contractor* shall remediate the defects and deficiencies in accordance with the schedule set out in the *Accepted* plan. *Acceptance* by the *Owner* of a remediation plan does not prohibit the *Owner* from pursuing other remedies it may have against the *Contractor* arising from the defects and deficiencies in the *Work*.

61.3 Amend paragraph 12.3.6 by adding at the end of the paragraph the following:

“The *Extended Warranty Period* for each *Extended Warranty* described in the *Specifications* shall commence on the expiry of the *Warranty Period* described in paragraph 12.3.1. The *Extended Warranties* shall be submitted to the *Owner* as part of the *Close-Out Documentation*.”

61.4 Add the following new paragraphs 12.3.7 to 12.3.12

12.3.7 The decision of the *Owner* shall be final as to the existence of such defects or deficiencies in the *Work*, the necessity of remedying same, and the remedial measures required.

12.3.8 If the *Contractor* fails to do the work to correct the defects or deficiencies, the *Owner* shall be entitled to carry out such work by its own forces or by *Other Contractors*. If such work is work which the *Contractor* should have carried out at the *Contractor's* own expense, the *Owner* shall be entitled to recover from the *Contractor* the cost thereof or may deduct the same from any monies due or that become due to the *Contractor*, including the warranty holdback, if any.

12.3.9 Any insurance, contract security, surety or deposit required by the *Contract Documents* shall remain in full effect at the expense of the *Contractor* during the *Warranty Period*.

12.3.10 The *Contractor* shall be responsible for the costs for inspection and testing for the correction of defects or deficiencies. The *Owner* shall have the right to deduct the cost of the inspection and testing from any monies owed to the *Contractor*.

12.3.11 The *Owner* may hold back, if set out in the *Contract Documents*, on each application for payment, advance payment or progress draw, 2.5% of the total amount payable under each such application for payment, advance payment or progress draw as security for the *Contractor's* performance of its warranty obligations. In the event the *Contractor* fails to correct a defect or deficiency during the warranty period within the required time and/or fails to pay for the redesign, reconstruction and other costs related to damages arising from a defect or deficiency, the *Owner* shall have the right to use the warranty holdback, or such part of it still being held by the *Owner* to pay for the costs of remedying the defect or deficiency and any redesign, reconstruction or other costs relating to the defect or deficiency. If the costs are greater than the amount of the warranty holdback, the *Contractor* shall pay the additional costs upon receipt of an invoice from the *Owner*. The *Contractor* shall have the right to invoice the *Owner* for the balance of the warranty holdback at the end of the *Warranty Period* or *Extended Warranty Period* as described in paragraph 12.3.4.

12.3.12 The *Contractor* shall assign to the *Owner* all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor*, *Supplier* or other person in connection with the *Work* and such assignment shall be with the consent of the assigning party where required by law or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the *Owner* under the *Contract Documents*. Until the expiry of the relevant *Warranty Periods* enforceable against the *Contractor*, the *Owner* shall have in its custody all warranties, guarantees and other obligations to third parties respecting the *Work*.

12.3.13 The *Contractor's* obligations under this GC 12.3 shall continue notwithstanding any withholding of payment made by the *Owner* under GC 5.8 – WITHOLDING OF PAYMENT or by performance by the *Owner* directly or through other forces of the *Contractor's* obligations under this *Contract*, where the *Contractor* is in default in the performance of such obligations.”

62. GC 13.1 INDEMNIFICATION

62.1 Delete GC 13.1 – INDEMNIFICATION in its entirety and replace it with the following:

“13.1.1 The *Contractor* shall indemnify and hold harmless the *Owner* and its directors, officers, employees, contractors and agents (collectively the “*Owner’s Indemnitees*”) from and against all loss, liability, damage, fines, cost, legal cost and disbursement whatsoever arising out of or related to the *Work* or the *Contract Documents* (“*Loss*”), by whomever made, sustained, incurred, brought or prosecuted, arising out of, or in connection with, anything done or omitted to be done by the *Contractor* in the course of the performance of the *Contractor’s* obligations under the *Contract Documents* or otherwise in connection with the *Work*. The *Contractor* shall, at the *Owner’s* election, either assume the defence of every proceeding brought in respect of such *Loss*, or cooperate with the *Owner* in the defence, including providing *Owner* with prompt Notice of any possible *Loss* and providing the *Owner* with all information and material relevant to the possible *Loss*.

13.1.2 GC 13.1 – INDEMNIFICATION shall govern over the provisions of paragraph 1.3.1 of GC 1.3 – RIGHTS AND REMEDIES.

13.1.3 The *Contractor* shall make full and complete compensation for any bodily injury or death to any person and for any damage caused to the *Owner’s* or a third party’s physical property by the *Contractor’s* act or omission.

13.1.4 The *Contractor* shall be liable for any claims arising from any personal injuries to or death of any of the *Contractor’s* employees, *Subcontractors* or *Suppliers* or from any *Loss* of or damage to any property belonging to the *Contractor* or its employees, *Subcontractors* or *Suppliers* during the performance of the *Work* unless caused by the negligent act or omission of *Owner*.

13.1.5 Notwithstanding any other provision of the *Contract Documents*:

- (a) The *Owner* shall not be responsible for indirect, consequential, special, incidental or contingent damages of any nature whatsoever, including loss or revenue or profit or damages resulting from interruption of service or transmission. This limitation shall apply regardless of the form of action, damage, claim, liability, cost, expense or loss, whether in contract (including fundamental breach), statute, tort (including negligence), or otherwise, and regardless of whether the *Owner* has been advised of the possibility of such damages; and,
- (b) Any express or implied reference to the *Owner* providing an indemnity or any other form of indebtedness or contingent liability that would directly or indirectly increase the indebtedness or contingent liabilities of the *Owner* or the Province of Ontario, whether at the time of execution of this *Contract* or at any time during the performance of the *Work* and the *Warranty Period*, shall be void and of no legal effect in accordance with s.28 of the *Financial Administration Act*, R.S.O. 1990, c. F.12.

13.1.6 The *Contractor* shall indemnify the *Owner* and the *Owner Indemnitees* and save them harmless from and against all *Loss* incurred by the *Owner* arising from:

- (a) any decision or interpretation by any court or *Authority Having Jurisdiction* that: (i) any of the *Contractor’s* employees are an employee of the *Owner*; or (ii) the *Owner* is liable to pay statutory contributions or deductions in respect of any of the *Contractor’s* employees under any laws, including employment insurance, provincial health insurance, income tax or other employment matters;
- (b) any health, medical disability or similar claims which the *Contractor* or *Contractor’s* employees may have during or after the term of this *Contract*;
- (c) a claim by any third party against the *Owner* alleging that the *Submittals* and their use by the *Owner*, infringes any *Intellectual Property* rights;
- (d) safety infractions committed by the *Contractor* under the *Occupational Health and Safety Act* or any other laws, guidelines or public health orders regulating health and safety at the *Work Site*;
- (e) any claims against the *Owner* for the failure of the *Contractor* to protect the confidentiality of *Confidential Information*;

- (f) exposure to, or the presence of, toxic or hazardous substances or materials which were either brought on to the *Work Site* by the *Contractor* or the *Contractor* mishandled or handled negligently or improperly the substances or materials;
- (g) a claim from adjacent landowners or other third parties regarding damage to their property due to the *Work*; and
- (h) the release into the environment of materials resulting from the *Work* that contain *Environmental Contaminants* during the transportation of such materials from the *Work Site* to the approved waste disposal site.

63. GC 13.2 WAIVER OF CLAIMS

63.1 Delete GC 13.2 – WAIVER OF CLAIMS in its entirety and substitute the following:

“13.2.1 WAIVER OF CLAIMS BY OWNER

As of the date of the final certificate for payment, the *Owner* expressly waives and releases the *Contractor* from all claims against the *Contractor* including without limitation those that might arise from the negligence or breach of contract by the *Contractor* except one or more of the following:

- .1 those made in writing prior to the date of the final certificate for payment and still unsettled;
- .2 those arising from the provisions of GC 13.1 – INDEMNIFICATION or GC 12.3 – WARRANTY;
- .3 those arising from the provisions of paragraph 9.6.1 of GC 9.6 – IMPACT ASSESSMENTS and arising from the *Contractor* failing to comply with the mitigation plans in the *Impact Assessment Reports* or failing to assess impacts and implement mitigation plans for impacts that arise during the *Work*;
- .4 those arising from the provisions of paragraph 9.2.5 of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES and arising from the *Contractor* bringing or introducing any toxic or hazardous substances and materials to the *Place of the Work* after the *Contractor* commences the *Work*;
- .5 those arising from the provisions of paragraph 9.5.1 of GC 9.5 – MOULD and arising from the *Contractor* bringing or introducing mould to the *Place of the Work*; or
- .6 those made in writing within a period of six (6) years from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, arising from the *Contractor’s* performance of the *Contract* with respect to material defects or deficiencies in the *Work*.

13.2.2 WAIVER OF CLAIMS BY CONTRACTOR

As of the date of the final certificate for payment, the *Contractor* expressly waives and releases the *Owner* from all claims against the *Owner* including without limitation those that might arise from the negligence or breach of contract by the *Owner* except:

- .1 those made in writing prior to the *Contractor’s* application for final payment and still unsettled; and
- .2 those arising from the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, GC 9.5 – MOULD, or GC 10.3 – PATENT FEES.

13.2.3 GC 13.2 – WAIVER OF CLAIMS shall govern over the provisions of paragraph 1.3.1 of GC 1.3 – RIGHTS AND REMEDIES.”

62. PART 14 OTHER PROVISIONS

62.1 Add new PART 14 as follows:

“PART 14 OTHER PROVISIONS

GC 14.1 OWNERSHIP OF MATERIALS

- 14.1.1 Unless otherwise specified, all materials existing at the *Place of the Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All work and *Products* delivered to the *Place of the Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials as its property when notified in writing to do so by the *Owner*.

GC 14.2 CONTRACTOR DISCHARGE OF LIABILITIES

- 14.2.1 In addition to the obligations assumed by the *Contractor* pursuant to GC 3.6 – SUBCONTRACTORS AND SUPPLIERS, the *Contractor* agrees to discharge all liabilities incurred by it for labour, materials, services, *Subcontractors* and *Products*, used or reasonably required for use in the performance of the *Work*, except for amounts withheld by reason of legitimate dispute which have been identified to the party or parties, from whom payment has been withheld.

GC 14.3 DAILY REPORTS/DAILY LOGS

- 14.3.1 The *Contractor* shall cause its supervisor, or such competent person as it may delegate, to prepare a daily log or diary reporting on weather conditions, work force of the *Contractor*, *Subcontractors*, *Suppliers* and any other forces on site and also record the general nature of *Project* activities. Such log or diary shall also include any extraordinary or emergency events which may occur and also the identities of any persons who visit the *Place of the Work* who are not part of the day-to-day work force.
- 14.3.2 The *Contractor* shall also maintain records, either at its head office or at the *Place of the Work*, recording manpower and material resourcing on the *Project*, including records which document the activities of the *Contractor* in connection with GC 3.4 – CONSTRUCTION SCHEDULE, and comparing that resourcing to the resourcing anticipated when the most recent version of the schedule was prepared pursuant to GC 3.4 – CONSTRUCTION SCHEDULE.

GC 14.4 CONFIDENTIAL INFORMATION

- 14.4.1 The *Contractor* must not advertise or issue any information, publication, document or article (including photographs or film) for publication or media releases or other publicity relating to the *Work* or the *Owner's Confidential Information* without the prior written approval of the *Owner*.
- 14.4.2 The *Contractor* must not, and must ensure that the *Contractor's* personnel do not, without the prior written approval of ONTC:
- .1 use *Confidential Information* other than as necessary for the purposes of fulfilling the *Contractor's* obligations under this *Contract*; or
 - .2 disclose the *Confidential Information*, other than to the *Contractor's* personnel who need the information to enable the *Contractor* to perform its obligations under this *Contract*, to the *Contractor's* legal advisors, accountants or auditors, or where disclosure is required by law (including disclosure to any stock exchange).
- 14.4.3 The *Contractor* must, within 10 *Working Days* (or any other period agreed in writing by ONTC) after a direction by the *Owner* to do so, return or destroy all *Confidential Information* in the *Contractor's* possession, custody or control.
- 14.4.4 If the *Owner* or the *Contractor* is required by law to disclose *Confidential Information*, it shall promptly notify the other party so that that party may intervene to prevent the disclosure.
- 14.4.5 The *Contractor* specifically acknowledges that *Owner* is subject to the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F. 4, and that the *Owner* may be compelled by law to disclose certain *Confidential Information*.
- 14.4.6 The rights and obligations under this Part continue after the termination of this *Contract*.

GC 14.5 CORRUPTION, FORCED LABOUR, SANCTIONS

- 14.5.1 The *Contractor* warrants that:

- .1 no bribe, gift or other inducement has been paid, promised or offered to any official or employee of the *Owner*, the Ministry of Transportation, the Government of Ontario or any other government official relating to the *Owner* entering into this *Contract* with the *Contractor*.
- .2 it will take reasonable steps to ensure that its officials and employees do not extort, accept or pay bribes or illicit payments, charge or accept fees that are not legally due or are in excess of those legally due, or unreasonably delay or obstruct the granting of permits, licences, or other such approvals in relation to the project. If the *Contractor* becomes aware of an actual or attempted bribe, extortion, delay or obstruction relating to this *Contract*, the *Contractor* shall report the incident to the *Owner* immediately.
- .3 it is unaware of any forced labour or child labour being used at any step of the production of goods produced, purchased or distributed by it in Canada or elsewhere or for the production of goods imported by the *Contractor*.
- .4 it has undertaken the appropriate due diligence to ensure its business and its supply chains do not use forced labour or child labour, including an assessment of its business and supply chains that may carry a risk of forced labour or child labour being used and the management of the risk. If applicable, the *Contractor* shall comply with the reporting requirements under the *Fighting Against Forced Labour and Child Labour in Supply Chains Act*, S.C. 2023 c.9.

14.5.2 In compliance with its international obligations or with United Nations obligations, Canada imposes restrictions on trade, financial transactions or other dealings with a foreign country or its nationals. These sanctions may be implemented by regulation under such acts as the *United Nations Act*, the *Special Economic Measures Act (SEMA)*, or the *Export and Import Permits Act*. The text of any such regulations is published in the Canada Gazette, Part II. It is the only text which is authoritative. The *Contractor* shall comply with any such regulations that are in force on the effective date of the *Contract* and will require such compliance by its first-tier *Subcontractors*. The *Owner* relies on such undertaking from the *Contractor* to enter into this *Contract*, and any breach of such undertaking shall entitle the *Owner* to terminate this *Contract* for default and to recover damages from the *Contractor*, including excess re-procurement costs.

GC 14.6 COMMUNICATIONS

14.6 The *Owner* or the Government of Ontario will lead and make any announcements relating to this *Contract* and the *Work*. The *Contractor* shall not make any announcement of any kind, including press releases, social media posts, public declarations, or any form of publication or announcement, in relation to this *Contract* or the *Work* unless prior written consent is given by the *Owner*. Should the *Contractor* be contacted by any media outlet or other person or entity wishing to make any form of publication or announcement, or seeking any information, in relation to this *Contract* or the *Work*, the *Contractor* shall provide no comment and shall immediately notify the *Owner*. The *Contractor* shall immediately notify the *Owner* if it becomes aware of any publication or announcement relating to the *Contract* or the *Work*.

GC 14.7 AUDIT

14.7 The *Contractor* shall keep proper and accurate financial accounts and records, including but not limited to its contracts, invoices, statements, receipts, and vouchers in respect of the *Project* for a least six (6) years after the date that *Ready-for-Takeover of the Project* was achieved (the "*Audit Period*"). The *Owner* has the right to audit all such financial accounts and records associated with the *Project* and the *Contract Documents*, including Submittals, timesheets, reimbursable out of pocket expenses, materials, goods and *Construction Equipment* claimed by the *Contractor*, at all reasonable times during the term of the *Contract* and the *Audit Period* by providing *Notice in Writing* of its intention to conduct the audit. The *Contractor* shall provide full access to the records to the *Owner* for the purpose of the audit.

GC 14.8 GENERAL

14.8.1 Nothing contained in this *Contract* shall be deemed or construed by the parties nor by any third party as creating the relationship of principal and agent, landlord and tenant, or of partnership or of joint venture between the parties.

- 14.8.2 In addition to those provisions which are expressly stated to survive the termination or expiration of this *Contract*, the provisions of this *Contract* that are by their nature intended to survive termination or expiration of this *Contract* shall continue in full force and effect subsequent to and notwithstanding termination or expiration until or unless they are satisfied.
- 14.8.3 This *Contract* may be executed with electronic signatures or may be executed and delivered by electronic transmission and the parties may rely upon all such signatures as though they were original signatures. This *Contract* may be executed in counterpart and all such counterparts shall, for all purposes, constitute one agreement binding on the parties.”

Schedule A to the Supplementary Conditions

Requirements for a “*Proper Invoice*”

To satisfy the requirements for a *Proper Invoice*, the *Contractor’s* application for payment must satisfy the following criteria:

- .1 is in the form of a written bill, invoice, application for payment, or request for payment;
- .2 is in writing;
- .3 contains the *Contractor’s* name, telephone number and mailing address and contact information of the *Contractor’s* project manager;
- .4 contains the title of the *Project* and the *Owner’s* contract number or purchase order number under which the work was performed and the related request for qualification, tender, or request for proposal number, as applicable;
- .5 contains the date the written bill, invoice, application for payment, or request for payment is being issued by the *Contractor*;
- .6 identifies the period of time in which the Work, labour, services, *Products* and/or materials were supplied to the *Owner*;
- .7 reference to the provisions of the *Contract* under which payment is being sought (e.g. progress payment / milestone, holdback, final payment, etc.);
- .8 a description, including quantities where appropriate, of the labour, services, *Products*, or materials, or a portion thereof, that were supplied and form the basis of the *Contractor’s* request for payment;
- .9 the amount the *Contractor* is requesting to be paid by the *Owner*, set out in a statement, based on the schedule of values *Accepted* under paragraph 5.2.5, separating out any statutory or other holdbacks, set-offs and HST;
- .10 with each application for payment after the first, a written statement that all accounts for labour, services, subcontracts, materials, equipment, *Products*, and other indebtedness which may have been incurred by the *Contractor* and for which the *Owner* might in any way be held responsible have been paid in full up to the previous application for payment, except for amounts properly retained as a holdback or as an identified amount in dispute;
- .11 with the applications for payment of holdback and for final payment, a Statutory Declaration in the form provided by the *Owner* attached as Schedule B stating that all accounts for labour, services, subcontracts, materials, equipment, *Products*, and other indebtedness which may have been incurred by the *Contractor* and for which the *Owner* might in any way be held responsible have been paid in full up to the previous application for payment, except for amounts properly retained as a holdback or as an identified amount in dispute;
- .12 a current Workplace Safety Insurance Board Clearance Certificate;
- .13 the progress report required under GC 3.4 CONSTRUCTION SCHEDULE, in the form provided by the *Owner* attached as Schedule C;
- .14 an updated *Construction Schedule* in native and .pdf formats;
- .15 if requested by the *Owner*, a current and valid certificate(s) of insurance for the insurance required under GC 11.1 – INSURANCE;
- .16 the following statement: “Provided this *Proper Invoice* complies with the requirements of the *Contract* and provided no *Notice of Non-Payment* is issued by the *Owner*, payment is due within 28 days from the date this *Proper Invoice* is received by the *Owner*.”;
- .17 the name, title, telephone number and mailing address of the person at the place of business of the *Contractor* to whom payment is to be directed;
- .18 in the case of the *Contractor’s* application for final payment;
 - (a) sufficient evidence that the *Contractor* has delivered all warranties to the *Owner*;

- (b) sufficient evidence that the *Place of the Work* has been left in a clean and tidy condition, including evidence that any remaining materials, tools, equipment, temporary work, and waste products and debris have been removed from the *Place of the Work*;
 - (c) landfill waybills for the disposal of the waste products, debris and excess soil removed from the *Place of Work* in accordance with the *Waste Management Plan*; and
 - (d) an executed, original, full and final release of all claims that may arise as a result of the *Work*, which full and final release executed by the *Contractor* shall be in a form approved by the *Owner*;
- .19 information identifying the authority, whether in the *Contract Documents* or otherwise, under which the services or materials were supplied;
- .20 any other information that is prescribed in Article A-3, if any, or identified by the *Owner* as required;
- .21 the amount invoiced to date;
- .22 the percentage of the *Contract Price* invoiced; and
- .23 the individual value of *Change Orders* approved during the invoice period and the cumulative value of *Change Orders* for the *Project*.

Schedule "B" to the Supplementary Conditions



Statutory Declaration of Progress Payment Distribution by Contractor

To be made by the Contractor **prior to payment** as a condition for release of holdback.

The last application for progress payment for which the Declarant has received payment is No. _____ dated _____.

Identification of Contract:

Name of Contract (Location and description of the Work as it appears in the Contract Documents)

Date of Contract : Day : _____ Month : _____ Year : _____

Name of Owner: Ontario Northland Transportation Commission

Name of Contractor:

Name of Declarant: _____ **Position or Title:** (of office held with Contractor) _____

Declaration

I solemnly declare that, as of the date of this declaration, I am an authorized signing officer, partner or sole proprietor of the Contractor named in the Contract identified above, and as such have the authority to bind the Contractor, and have personal knowledge of the fact that all accounts for labour, subcontracts, products, services, and construction machinery and equipment which have been incurred directly by the Contractor in the performance of the work as required by the Contract, and for which the Owner might in any way be held responsible, have been paid in full as required by the Contract up to and including the latest progress payment received, as identified above, except for:

Holdback monies properly retained,

Payments deferred by agreement, or

Amounts withheld by reason of legitimate dispute which have been identified to the party or parties, from who payment has been withheld.

I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Declared before me in _____

City/Town Province

on _____.

Date

Signature of Declarant

A Commissioner for Oaths or Notary Public

Schedule "C" to the Supplementary Conditions

Project Status Report

Project Title:

Reporting Period:

Date:

Project Details:

Planned Budget: Indicate the original contract value

Current Approved Budget: Indicate the original contract value plus approved change orders

Planned Completion: Indicate the contract schedule completion date

Current Project Completion: Fill in revised date if schedule extension approved through change order

Planned Project Percent Complete: How far should they have progressed by this date?

Actual Project Percent Complete: What is their actual percent complete?

Executive Summary

Provide a summary of what happened during the period, any concerns, risks or wins and plans for the upcoming period.

Work Completed in the Period

List

List

List

List

List

Work Planned for Next Period

List

List

List

List

Issues and Concerns

Use this area to identify any concerns related to the project.

Status of Progress

Include a graph to show progress or eliminate this section.

SCHEDULE D

DUTY TO NOTIFY/EMERGENCY WORKS NOTIFICATION FORM

ONTC DUTY TO NOTIFY / EMERGENCY WORKS NOTIFICATION FORM

SUBMISSION REQUIREMENTS

Contact DFO By Phone 1-855-852-8320 **AND** submit this form to fisheriesprotection@dfo-mpo.gc.ca

Submit this form to the consultant and the ONTC Project Manager: Esmail Zougari, esmail.zougari@ontarionorthland.ca and to ONTC Legal : legal@ontarionorthland.ca

MNRF Office: Contact Area MNRF Office

PART 1: NOTIFICATION DETAILS

Type of Notification: DUTY TO NOTIFY EMERGENCY WORK

Date of Notification:	Time of Notification:
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ONTC Contract #:	DFO PATH File # (if applicable):
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PART 2: REPORTING INFORMATION

Name of Person Reporting:	Name of Field Contact:
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Telephone #:	Telephone #:
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Email:	Email:
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PART 3: INCIDENT INFORMATION

Bank failure Culvert failure

Erosion and Sediment Control Measures Failure Beaver dam breach

Other (specify): Hwy shoulder failure

Date of Incident:	Time of Incident:
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Location of Site:	Geographic Coordinates (Lat/Long):
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Nearest Community (city/town):	Name of Waterbody(ies):
	Type (watercourse, lake/pond, ditch):

Indicate if any of the following impacts have occurred or are about to occur:

Fish Kill (if yes, approximately how many):_____ Sediment deposition in channel

Bank failure Obstruction of fish passage through:

Modification of flows Channel Culvert

Other (specify):

<p>Immediate Actions Taken:</p> <p>(Describe the activities/works that are being / have been immediately implemented. e.g. mitigation measures, damming / pumping etc.)</p>	
<p>Photos: <input type="checkbox"/> Attached</p> <p>(Where feasible, it is recommended that the photos be submitted with the form or as follow up)</p>	
<p>PART 4: EMERGENCY WORKS</p>	
<p>Description of Proposed Emergency Works:</p> <p>(Be as specific as possible. Describe what work will be undertaken within the next two weeks.</p> <p>E.g. culvert replacement (include existing and new culvert diameter / length / type), slope restoration (include material / method),:</p>	
<p>Mitigation measures:</p> <p>(Describe what measures have been or will be implemented to address the immediate issue. E.g. sediment fence, turbidity curtain, check dam, fish salvage etc.):</p>	
<p>Indicate which of the works will be followed (if applicable):</p> <p>Beaver Dam Removal <input type="checkbox"/> Culvert Maintenance</p> <p>Bridge Maintenance <input type="checkbox"/> Like-for-like culvert replacement</p> <p>Ditch maintenance within 30 m of a <input type="checkbox"/> Temporary watercourse crossing waterbody</p> <p>Riparian vegetation maintenance in existing right-of-way</p>	
<p>The Emergency Works are (check one):</p> <p>Temporary (additional work will be required) <input type="checkbox"/> Final (no additional work required)</p>	
Proposed Start Date: (YYYY/MM/DD)	Proposed End Date: (YYYY/MM/DD)
<p>PART 5: OTHER AGENCIES NOTIFIED</p>	
Other Agency(ies) Notified: Yes <input type="checkbox"/> No <input type="checkbox"/>	Agency(ies) Notified:
Date Notified:	Incident Report No. (if issued by notified Authority):

END OF SUPPLEMENTARY CONDITIONS

THESE SPECIAL SUPPLEMENTARY CONDITIONS AMEND AND TAKE PRECEDENCE OVER THE AGREEMENT, DEFINITIONS AND GENERAL CONDITIONS OF THE CCDC 2 2020 AND THE ONTARIO NORTHLAND SUPPLEMENTARY CONDITIONS CCDC 2 2020 (REV 16 MAY 2024)

SSC1 DEFINITIONS

Add new definitions:

Construction Documents consist of *Drawings, Specifications* and other documents prepared by or on behalf of the *Contractor*, based on the *Contract Documents* and *Accepted* in writing by the *Owner* as meeting the *Owner's* requirements as described in the *Contract Documents*.

Contractor Consultant means the person or entity, other than the *Consultant* retained by the *Owner*, that may be engaged by the *Contractor* to perform all or part of the *Design Services*.

Design Services are the professional design and related services required by the *Contract Documents*.

Owner's Statement of Requirements means the written requirements and information provided by the *Owner* for the *Design Services*.

Amend the definition of *Work* by adding the words “including the *Design Services*” at the end of the definition.

SSC2 DESIGN SERVICES

Add new GC 2.6 DESIGN SERVICES

2.6.1 The *Contractor* shall submit the timing of the major activities of the *Design Services* as part of the *Construction Schedule* required by GC 3.4.1 and any revisions thereto. The *Owner* and the *Contractor* shall agree on the schedule for the submission of the *Construction Documents* by the *Contractor* and the time required for review of the submittals of the *Construction Documents* by the *Owner* and the *Consultant*.

2.6.2 The *Contractor* shall notify the *Owner* and the *Consultant* of any significant error, inconsistency or omission discovered in the *Owner's Statement of Requirements* or other information provided by or on behalf of the *Owner*. The *Contractor* shall not proceed with the *Design Services* until the *Contractor* and the *Owner* have agreed in writing how the information should be corrected or supplied.

2.6.2 The *Owner* and the *Consultant* shall review the design in the design development documents and proposed *Construction Documents* as the *Design Services* proceed to confirm that the design is in compliance with the *Owner's Statement of Requirements* and the *Contract Documents*. At the time of submission, the *Contractor* shall advise the *Owner* and *Consultant* in writing of any significant deviations in the proposed *Construction Documents* from the requirements of the *Contract Documents*, which the *Owner* may *Accept* or reject.

- 2.6.3 The review by the *Owner* and the *Consultant* shall not relieve the *Contractor* of responsibility for errors or omissions in the *Construction Documents* nor for meeting all requirements of the *Contract Documents* unless the *Owner Accepts*, in an approved *Change Order*, a deviation from the *Contract Documents*.
- 2.6.4 Upon completion of the final review of the *Construction Documents* by the *Owner* and the *Consultant*, the *Owner* shall advise the *Contractor* in writing that the *Owner* has *Accepted* or rejected the proposed *Construction Documents*. If rejected, the *Owner* shall provide the *Contractor* with the reason for the rejection and the *Contractor* shall revise the proposed *Construction Documents* to address the non-conformance and submit the revised *Construction Documents* to the *Owner* and *Consultant* for review within the time agreed to by the *Contractor* and *Owner*. The *Contractor* shall advise the *Owner* in writing of any revisions other than those requested by the *Owner*.
- 2.6.5 The *Contractor* shall be fully responsible to the *Owner* for:
- .1 acts and omissions of a *Contractor Consultant*;
 - .2 the *Design Services* performed by a *Contractor Consultant* which *Design Services* shall be provided with the degree of care, skill and diligence that would normally be exercised by an experienced, skilled and prudent consultant supplying design services for similar projects; and
 - .3 the quality of the *Design Services* and shall undertake the quality control activities that are required to ensure such quality.
- 2.6.6 The *Owner* may, for reasonable cause, at any time before the *Contractor* has executed the contract with a *Contractor Consultant*, object to the use of a *Contractor Consultant* and require the *Contractor* to use another *Contractor Consultant*.
- 2.6.7 Upon receipt of a *Notice in Writing* from the *Owner*, the *Contractor* shall take action to rectify any situation involving a *Contractor Consultant* whose work is unsatisfactory to the *Consultant* or the *Owner* or who are considered by the *Consultant* or the *Owner* to be unskilled or otherwise objectionable. If, after the *Owner* has provided the notice to the *Contractor*, the *Contractor* is not able to rectify the concerns of the *Owner* to the satisfaction of the *Owner*, then the *Contractor Consultant* shall be removed from the *Project* and the *Contractor* shall indemnify and hold the *Owner* and the *Consultant* harmless from and against any damages, costs, expenses, claims, injuries and other liabilities suffered by the *Owner* or the *Consultant* arising from the dismissal of such *Contractor Consultant*.