

ONTARIO NORTHLAND

TRANSPORTATION COMMISSION

Request for Proposals No. RFP 2024 039

For

Demolition of Various ONTC Buildings

REPLY BY DATE: 2:00:00 p.m. Monday, August 26, 2024

Primary Contact:

Brinda Ranpura
Procurement Contracts Specialist
Ontario Northland Transportation Commission
555 Oak Street East
North Bay, Ontario, P1B 8L3
Email: brinda.ranpura@ontarionorthland.ca

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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
- (c) Schedule 3-A-3 – Reference Documents

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 – Schedule of Progress Payments
- (l) Proposal Form 12 – List of Personnel and Resumes
- (m) Proposal Form 13 – Contractors Prequalification Statement
- (n) Proposal Form 14 – Claims

Part 5 – Draft Agreement

- (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 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.

4.4 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 form of draft agreement attached in Part 5. Proposal Form 5 – Compliance with Contract Documents allows a Respondent to submit suggested changes to the draft agreement. ONTC does not have any obligation to accept any proposed changes to the draft agreement 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 draft agreement; (ii) consider significant material proposed changes to negatively impact the evaluation of the Respondent's proposal; or (ii) disqualify any Respondent where the changes or the number of changes made by the Respondent to draft 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 Draft 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) Certificates of insurance as specified in the draft agreement;
 - (b) Executed Contractors Health and Safety Responsibility Agreement. Refer to Proposal Form 7;
 - (c) Respondent's Health and Safety, and Environmental Policies as identified in Proposal Form 7; and,
 - (d) 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 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 ten (10) percent of the value of the Proposal provided by the Respondent. 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 039 Demolition of Various ONTC Buildings	
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, August 13, 2024 at 10:30 a.m. Respondents must complete the Respondents' Meeting Registration Form and return it via email by Monday, August 12, 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 039 Demolition of Various ONTC Buildings			
Proposal Detail <i>continued</i> – <u>Note the requirements below are new to ONTC</u>			
Submission Requirements	Respondents are required to submit <u>all</u> 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 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 – Schedule of Progress Payments		
	Proposal Form 12 - List of Personnel <u>and Resumes</u>		Material
	Proposal Form 13 - Contractor's Qualification Statement <u>Include Company Profile and 3 Project Descriptions</u> <u>Include Subcontractor Profiles, if applicable</u>		Material
Proposal Form 14 - Claims			

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

RFP 2024 039 Demolition of Various ONTC Buildings			
Important Dates			
Publication Date		Thursday, July 25, 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		Monday, August 26, 2024, at 2:00:00 p.m. (EST)	
Target Completion Date		December 30, 2024	
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 must be a Canadian Business or domiciled in an international trade partner country		

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

RFP 2024 039 Demolition of Various ONTC Buildings		
Procedure of Selection <i>continued</i>		
Evaluation General Procedure	ONTC will evaluate the proposals based on the following evaluation criteria outlined below.	
Evaluation Criteria	Description	Weight
	Price ONTC will use the following to calculate the initial score for price: Lowest price of all Proposals / price of Respondent x 50 = Score <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>	50
	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)	15
	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? - 5 points	10

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

RFP 2024 039 Demolition of Various ONTC Buildings		
Procedure of Selection <i>continued</i>		
	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	10
	Local Knowledge Describe your experience with the climatic (cold temperatures) and environmental requirements in Northern Ontario – 15 points	15
	Total	100

**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 039

Description of Requirement:

Demolition of Various ONTC Buildings

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 Demolition of Various ONTC Buildings.

Summary

ONTC is seeking Proposals from Qualified contractors to demonstrate qualifications, experience, and proposed approach for completing the demolition of various buildings as identified within this document.

Condition of the Place of Work

The locations of the work are identified in the Project Locations section of this package. The exact GPS locations have been identified in the "Project Location" section of this document.

Each Respondent must form their own opinions and conclusions with respect to the Work addressed in the RFP Documents. Before submitting a Proposal, the Respondent shall investigate the Place of the Work to fully ascertain existing conditions, circumstances, and limitations affecting the Work. No allowances will be made for additional costs and no claims will be entertained in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence prior to submitting a bid.

Background Information

These buildings were constructed between 1950 and 1990. Many of these buildings are now vacant and in need of extensive repairs. For that reason, ONTC has decided to relocate the stored content(s) of those buildings and demolish the buildings.

Project Locations

Project Location	Address
Cheminis Shed	Lat: 48.162588°, Long: -79.527087°, Cheminis Road, Cheminis, ON
Cochrane MOW Shed	Lat: 49.059141°, Long: -81.014901°, 20 Boisvert Crescent, Cochrane, ON
Driftwood Storage Shed	Lat: 49.140910°, Long: -81.381787°
Gardiner Storage Shed	Lat: 49.310714°, Long: -81.028145°
Matheson Shed 1	385 Railway St, Matheson, ON
Matheson Shed 2	385 Railway St, Matheson, ON
Matheson Shed 3	385 Railway St, Matheson, ON
Otter Rapids Tool House	Lat: 50.187023°, Long: -81.642325°, Otter Rapids, ON
Rouyn-Noranda Oil Shed	580 Boul Temiskaming, Rouyn-Noranda, Quebec
Rouyn-Noranda Storage Shed 1	580 Boul Temiskaming, Rouyn-Noranda, Quebec
Rouyn-Noranda Utility Shed 2	580 Boul Temiskaming, Rouyn-Noranda, Quebec
Rouyn-Noranda Utility Shed 3	580 Boul Temiskaming, Rouyn-Noranda, Quebec
North Bay Old Signals Building	Lat: 46.305856°, Long: -79.446931°, Laurier Ave, North, Bay, ON

Scope of Work

The Contractor will be required to supply all engineering, labour, material, equipment, travel, living expenses, permits, fees, and all other requirements necessary to deliver the requested services in compliance with all applicable laws.

The Contractor is responsible for following all applicable environmental laws and regulations, and building codes (incl. obtaining any necessary permits) in completing this demolition work and is expected to follow appropriate EPA and OHSA regulations, particularly:

- EPA
 - O. Reg. 347 (as amended to O. Reg. 326/03 – General - Waste Management)
 - O. Reg. 406/19 – On-Site and Excess Soil Management
- OHSA
 - O. Reg. 490/09 (as amended) – Designated Substances
 - O. Reg. 278/05 (as amended) – Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations

The building envelopes have been recently inspected and are vacant. Should any incidental wildlife be encountered in the work area by the Contractor during the course of work, wildlife shall be left alone and (where necessary) allowed to leave the site of their own accord. Any wildlife encountered by the Contractor during the course of work shall be reported to ONTC immediately so that further direction may be provided.

DOCUMENTATION

1. Contractor to take photographs before demolition is started and after demolition has been completed.

DEMOLITION

1. Project supervisor with previous deconstruction experience must be present on-site throughout the project.
2. All debris created by the execution of the work shall be removed progressively from the site to appropriate waste disposal sites.
3. Carefully remove and store reusable site materials and dismantle items containing materials for salvage and stockpile salvaged materials at locations as approved by the ONTC.
4. Demolition and Construction activities shall not adversely affect the structural integrity of any structure, sidewalks, pavement, and other infrastructure located on adjacent areas. Contractor will be responsible for any remediation work required due to damage during the work, which remediation shall be completed to the satisfaction of the owner of the damaged property at no additional cost to the ONTC.
5. Contractor will remove the concrete slab and foundation for the entire building.
6. Restore the work site to a finished flat at-grade condition. Start backfilling only after inspection and receipt of written approval of fill material and spaces to be filled from ONTC.
7. The Contractor shall backfill the excavated areas with a clean backfill material to the elevation of the ground surface existing immediately prior to the start of excavation. The surface should be graded to drain water away from the adjacent rail tracks and towards the street and nearest drains.
8. Allow for Twelve (12) inches of granular A on top of the clean fill.
9. The granular backfill shall be placed in layers not exceeding fifteen centimeters (150 mm) in depth and each layer shall be thoroughly compacted by means of packers or mechanical tampers to a relative compaction of not less than 95% Standard Proctor Density for the backfill material at optimum moisture content until no further settlement is apparent and the particles are well keyed into place.
10. The excavated area should be cleaned off all grass, loose stones, and rubbish before backfilling. Any water in the area will need to be pumped out before backfilling. Ensure pumped water into sewer or drainage systems is free of suspended materials.
11. Any groundwater pumping should be managed accordingly to ensure sediment-laden water doesn't enter local drainage ditches.
12. Do not discharge decontaminated water, or surface water runoff, or groundwater which may have come in contact with potentially contaminated material, off site or to municipal sewers.
13. Provide and maintain temporary measures which may include, silt fences, hay or straw bales, ditches, geotextiles, drains, berms, terracing, riprap, temporary drainage piping, sedimentation basins, vegetative cover, dikes, and other construction required to prevent erosion and migration of silt, mud, sediment, and other debris off site or to other areas of site where damage might result, or that might otherwise be required by Laws and Regulations. Make sediment control measures available during construction.

14. Backfill material shall be free from frozen snow, ice, frozen materials, trash, brick, clay lumps, broken concrete, tree roots, sod, ashes, class plaster, vegetable matter and any other foreign matter.
15. Backfill material shall be stockpiled within a suitable area approved by ONTC.
16. During freezing weather, the Contractor shall protect all backfill material from freezing until it is placed to the satisfaction of the ONTC.
17. Contractor will coordinate with ONTC to determine all building or area contents that will be retained by ONTC. Contractor will remove all the contents in the buildings prior to the demolition and must identify the approved waste disposal site and take it there. This will be included in the Contractor's quote.
18. ONTC requires a copy of all waste disposal weigh bills for all debris and materials removed from the work site from the approved waste disposal site. If weigh bills are not issued at the dump facility, the Contractor is to provide a letter from the accepting party, whereby the party confirms acceptance of the materials.
19. Any trees that will be danger to buildings or persons, will be removed prior to the demolition by the Contractor including the stumps so they are not a trip hazards. Infill tree holes with clean fill.
20. Remove all grass and topsoil around the buildings section to a maximum of 36" and fill with A gravel. Allow for 10 inches minimum in depth of gravel. If more material is required to be removed, it must first be approved by the ONTC representative before starting the work.
21. Contractor shall be responsible for all temporary shoring, bracing and supports required during the project.
22. Cap the pipes located in sump pits and catch basins then fill with clean fill. Allow for 12-inch A gravel on top layer and compact. All filling and compaction shall be done as specified within this document and per best practices.
23. Carefully remove and store reusable site materials and dismantle items containing materials for salvage and stockpile salvaged materials at locations as approved by the ONTC.
24. Conduits and pipes shall be located, safely disconnected, cut, filled with flowable fill concrete capped or plugged min x below grade. Make watertight with adjoining structures.
25. Dispose of all demolished building materials that are not specified by ONTC for re-use.
26. Soils in the area may be contaminated and should be left in place.
27. Dispose of all excess soils according to applicable regulations (e.g., O. Reg. 406/19)
28. Comply with the requirements of MECP guidelines NPC-115 and NPC-118 with respect to equipment sound levels
29. Specify receptor-based vibration limits and restrictions on equipment set-back distances to minimize the risk of building damage.
30. Apply the following noise abatement measures:
 - Efficient intake and exhaust silencers on equipment.
 - Sound deadening lining on storage bins.
 - Keep noise to a minimum when conducting truck loading, unloading and hauling operations.
 - Avoid unnecessary revving of engines and switch off equipment when not required to idle.

- Place stationary noise producing equipment at maximum distance from public areas and sensitive receptors. Direct noise sources away from noise sensitive receptors if possible.

SALVAGE OF MATERIALS

1. The contractor shall take ownership of all scrap/salvage materials.
2. Contractor shall not sell materials on Site.
3. Contractor must not overload floor or wall with accumulations of material or debris or by other loads.

PERMITS

1. The Contractor shall obtain, prior to commencing the demolition/removal, and include the cost in their proposal, unless otherwise as specified, all permits and consents necessary to perform lawfully the demolition/removal and shall comply with all the statutes, law, ordinances, regulations, and orders whether Federal, Provincial or Municipal, relating the demolition removal of the structure. A copy of the applicable permit(s) must be sent to the ONTC contact person prior to the demolition.
2. The Contractor or authorized sub-contractor who will haul contaminated soils/materials must have a certificate of approval for a Waste Management System from the Ministry of Environment valid for transport of hazardous waste.
3. The Contractor shall employ appropriate measures to ensure the safe handling and disposal of all contaminated materials, as per industry standards and consistent with all applicable laws.
4. A "Notice of Project" shall be submitted by the Contractor to the Ministry of Labour.
5. The manner in which the demolition is carried out shall be governed by the requirements of the Occupational Health and Safety Act, the Environmental Protection Act and Regulations there under, the Building Code, municipal by-laws and any other applicable law and any additional requirements by ONTC.

UTILITY DISCONNECTS

1. The Contractor will be responsible for coordinating and cost of all utility disconnects. Before commencing any work on the property, all the utility services (gas, hydro and water) must be disconnected.

DESIGNATED SUBSTANCES/ABATEMENT

1. All abatement work must comply with all Municipal, Provincial and Federal laws and as stated within the project specifications.
2. All asbestos disturbance work must be completed by a fully insured and qualified asbestos/hazardous abatement contractor.
3. Any additional, suspect materials identified during work or demolition activities should be treated as ACMs unless proven otherwise through material sample collection and analysis, in accordance with O. Reg. 278/05. The Contractor to provide a scope of work for the removal and disposal of all Designated Substances outlined in the DSS report for each building.

4. Post abatement visual inspection(s) to be performed by ONTC upon completion of all asbestos removal work within both Bunkhouses at the Cochrane location prior to total demolition work.
5. The following tables indicate the locations, designated substances and related abatement requirements / procedures to be followed / conducted under this demolition project. Refer to Tab1 for a full DSS Report.

DESIGNATED SUBSTANCE	ABATEMENT REQUIREMENTS / PROCEDURES
Asbestos	<ul style="list-style-type: none"> • Type 1 abatement operation in accordance with O. Reg. 278 (as amended) of all asbestos-containing roofing caulking/putty (non-friable.) • Type 1 abatement operation in accordance with O. Reg. 278 (as amended) of all asbestos-containing "Transite" board (non-friable).
Mercury	<ul style="list-style-type: none"> • The disposal of mercury containing equipment such as thermostats and fluorescent light tubes should be conducted in accordance with O. Reg. 347 (as amended) and O. Reg. 490/09. • All fluorescent light tubes shall be removed, placed in airtight containers and disposed at a facility that can extract the mercury vapours from the tubes, and then properly dispose of the waste materials.
Lead	<ul style="list-style-type: none"> • Total mechanical demolition of buildings containing low-level lead painted surfaces to be performed under a minimum Class 1 operation as outlined in "Lead Guideline for Construction, Renovation, Maintenance or Repair", issued in October 2014 by the Environmental Abatement Council of Ontario (EACO) using general demolition normal dust control procedures. • Total mechanical demolition of building materials confirmed or "suspected" to contain lead (i.e. copper piping) to be removed under a minimum Class 1 operation as outlined in "Lead Guideline for Construction, Renovation, Maintenance or Repair", issued in October 2014 by the Environmental Abatement Council of Ontario (EACO) using general demolition normal dust control procedures and properly recycled. • General health and safety precautions must still be implemented, which include, prohibiting eating, drinking, smoking and chewing in the work area(s), implementing dust suppression techniques and washing facilities for workers to wash hands and face. • Waste materials which exceed the Leachate Quality Criteria for lead of 5 ppm, as established using the Toxicity Characteristic Leaching Procedure (TCLP) per O. Reg. 347 (as amended) is considered lead hazardous waste and must be transported and disposed of at a licensed waste facility. <p>Note: Demolition waste materials containing low-level lead painted surfaces is not suspected to exceed the Leachate Quality Criteria for lead of 5 ppm.</p>

DUST CONTROL

1. Respondents shall provide a site-specific plan/policy for dust control as part of their submission.
2. The Contractor shall be responsible for supplying all the materials and equipment required for dust control including but not limited to water.
3. Contractor shall prevent the escape of dust and debris from the work area to the adjacent areas including residential areas nearby and ONTC outside of the work area.

HOARDING AND FENCING

1. The Contractor is to comply with all Municipal By-laws and all other applicable laws.
2. The Contractor is to erect their own fencing to protect their "Work Island." The minimum height of the fencing shall be six (6) feet and must also conform with all applicable laws. Fencing must encompass the full perimeter of the building/worksite. The Contractor must ensure that the fencing is secured when the Contractor is not on site.
3. Contractor to provide "Signage" on the fencing warning of any/all hazards that may apply to the work site.

HEALTH, SAFETY AND SECURITY

1. Site protection to adjacent occupied areas is paramount.
2. Due to the proximity of the ONTC rail system, ONTC's Blue Flag Procedure will be required to identify the work area. Contractor must provide a schedule in advance to ensure proper planning is in place for the Flagging requirements. The coordination with the other ONTC departments will be handled by the ONTC Project Manager.
3. During the performance of the work, the Contractor shall keep the land and buildings in a safe and orderly state, as appropriate in accordance with good industry practice, to avoid danger to persons thereon and in the immediate vicinity thereof, shall take all reasonable measures in accordance with good industry practice to prevent access to the designated area on the land and buildings under remediation by any persons not entitled to be present, shall perform all the obligations of a "constructor" within the meaning of the Occupational Health and Safety Act (Ontario) and shall be solely responsible for construction safety on the land and buildings and for compliance with the health and safety provisions of the contract documents, the Occupational Health and Safety Act (Ontario) and applicable law.
4. Traffic Control- any road/sidewalk closures must be done by obtaining a road closure permit through the local municipality.
5. Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
6. The Contractor shall ensure that all measures are taken to protect the public at all times including hoarding and other safety barriers per the applicable regulations as stated in this RFP.
7. The work shall be fully supervised and controlled to create as little disruption, dust, noise as

possible consistent with the Contractor's dust abatement policy/plan, the applicable municipality By-laws related to noise and public disturbances and ONTC requirements. The Supervision will be the responsibility of the Contractor.

8. After building is demolished, the Contractor will ensure that the property is safeguarded from any potential trip/fall hazards or other risks that may be in the location of the "demolished building".

CLEANING AND RESTORATION

1. Keep site clean and organized throughout the project.
2. Upon completion of project, remove debris, trim surfaces and leave work site clean.
3. Upon completion of project, reinstate parking surfaces, walkways, affected by Work to condition which existed prior to beginning of Work and match condition of adjacent, undisturbed areas.
4. In addition to the progressive removal of waste materials and debris from building and site, leave the site clean, perform the following before final inspection by the ONTC.
 - Spray-wash all exterior building finishes in construction area and any adjacent building areas soiled by the construction processes.
 - Broom clean and wash all surfaces soiled from delivery or removal materials.
 - Remove all dirt and other disfigurations from exterior surfaces.
 - Sweep clean all paved areas.

WORKING HOURS

1. Working hours for the site will be Monday to Friday between the hours of 7 am- 5 pm.
2. Work outside of these hours will be permitted only if pre-arranged and approved by the ONTC.

The attached documents in Schedule 3-A-3 – Reference Documents are part of this Scope of Work:

- General Requirements for Contractors
- HSP-007 Blue Signals Flags Procedure
- Designated Substances Survey Report – ONR - Cochrane Various Buildings - DSS Report
- Designated Substances Survey Report - 337606 HBMS (Pre-demo) Laurier Ave North Bay ON ONTC Feb 20 2024
- Other DSS Surveys to come. (Cheminis, Larder Lake, Rouyn, Matheson and Otter Rapids)

PROPOSAL DELIVERABLES





Construction Schedule


1. Work must be completed by December 30, 2024.
2. Demolition activities shall not take place unless the demolition plan is reviewed by the ONTC. Review does not relieve the Contractor from any responsibility or liability to the ONTC.
3. The work will be carried out in a single phase.

Reference Documents

The following documents are included in this RFP for reference only. Contractors bidding on this project shall make their own interpretations of this information and carry out further work as they deem necessary to assess the scope of the project.

Reference Photos

Building Name	Location/Address	Picture
Cheminis Shed	Lat: 48.162588° Long: -79.527087°	
Cochrane MOW Toolhouse	Lat: 49.059141° Long: -81.014901° 20 Boisvert Crescent, Cochrane, ON	
Driftwood Storage Shed	Lat: 49.140910° Long: -81.381787°	
Gardiner Storage Shed	Lat: 49.310714° Long: -81.028145°	

Matheson Shed 1	385 Railway St, Matheson, ON		
Matheson Shed 2	385 Railway St, Matheson, ON		
Matheson Shed 3	385 Railway St, Matheson, ON		
Otter Rapids Toolhouse	Lat: 50.187023° Long: -81.642325°		
Rouyn-Noranda Oil Shed	580 Boul Temiskaming, Rouyn- Noranda, Quebec		
Rouyn-Noranda Storage Shed 1	580 Boul Temiskaming, Rouyn- Noranda, Quebec		

Rouyn-Noranda Utility Shed 2	580 Boul Temiskaming, Rouyn- Noranda, Quebec		
Rouyn-Noranda Utility Shed 3	580 Boul Temiskaming, Rouyn- Noranda, Quebec		
North Bay Old Signals Building	Lat: 46.305856° Long: -79.446931° Laurier Ave, North, Bay, ON		

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

Specifications

Division 00 and 01 Specifications	
01 11 00	Summary Of Work
01 14 00	Work Restrictions
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 51 00	Temporary Utilities
01 52 00	Construction Facilities
01 55 26	Traffic Controls
01 56 00	Temporary Barriers and Enclosures
01 74 00	Cleaning
01 74 19	Waste Management and Disposal
02 41 16	Structure Demolition Draft
02 65 00	Underground Storage Tank Removal

1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises the following:
 - .1 Demolition of the following existing buildings.
 - .1 Boston Creek Toolhouse
 - .2 Cheminis Shed
 - .3 Cochrane MOW Shed
 - .4 Driftwood Storage Shed
 - .5 Gardiner Storage Shed
 - .6 Matheson Shed 1, Shed 2 and Shed 3
 - .7 Otter Rapids Toolhouse
 - .8 Rouyn-Noranda Oil Shed, Storage Shed 1 and Utility Shed 1 and 2
 - .9 North Bay Old Signals Building.

1.03 CONTRACT METHOD

- .1 Construct Work under single stipulated price contract.
- .2 Relations and responsibilities between Contractor and subcontractors and suppliers, subcontractors assigned by Owner are as defined in Conditions of Contract. Assigned Subcontractors must, in addition:
 - .1 Furnish to Contractor, bonds covering faithful performance of subcontracted work and payment of obligations thereunder when Contractor is required to furnish such bonds to Owner.
 - .2 Purchase and maintain liability insurance to protect Contractor from claims for not less than limits of liability which Contractor is required to provide to Owner.

1.04 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures
- .2 Submit Project construction progress schedule in accordance with contract documents.
- .3 Submit site-specific and Work Plan Health and Safety Plan in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .4 Submit a Project Management Plan, including communication and risk plans.
- .5 Submit Quality Management Plan.

1.05 WORK BY OTHERS

- .1 The work under this contract will be performed by the Contractor.
- .2 Contractor shall co-operate with other Contractors, if any, in carrying out their respective works and carry out instructions from ONTC Representative.
- .3 Contractor shall co-ordinate work with other contractors. If any part of work under this Contract depends for its proper execution or result upon work of another contractor, report promptly to ONTC Representative, in writing, any defects which may interfere with proper execution of Work.

1.06 PERIOD OF WORK

- .1 Work shall commence as soon as possible after award and be completed no later than October 31, 2024.

1.07 CONTRACTOR USE OF PREMISES

- .1 Contractor will have full access and use of the construction island until Substantial Performance.
- .2 In some circumstances, Contractor shall coordinate and limit his access to allow:
 - .1 Owner occupancy.
 - .2 Partial owner occupancy.
 - .3 Work by other contractors or Utilities providers.
- .3 Co-ordinate use of premises under direction of ONTC Representative.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .5 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.

1.09 OWNER OCCUPANCY

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

1.14 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Execute work with least possible interference or disturbance to ONTC operations and normal use of premises. Arrange with ONTC Representative to facilitate execution of work.

1.15 EXISTING SERVICES

- .1 Notify, ONTC Representative and utility companies of intended

- interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give ONTC Representative at least 72 hours notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian, vehicular traffic and ONTC operations.
 - .3 Provide alternative routes for personnel, pedestrian and vehicular traffic.
 - .4 Establish location and extent of service lines in area of work before starting Work. Notify ONTC Representative of findings.
 - .5 Submit schedule for approval by ONTC Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
 - .6 Provide temporary services when directed by Consultant or ONTC Representative to maintain critical building and tenant services.
 - .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
 - .8 Where unknown services are encountered, immediately advise ONTC Representative and confirm findings in writing.
 - .9 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
 - .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. Any damage to existing services will be the responsibility of the Contractor.

1.16 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy of each document as follows:
 - .1 Contract
 - .2 Locates
 - .3 Field Test Reports
 - .4 Copy of Approved Work Schedule.
 - .5 Health and Safety Plan and Other Safety Related Documents.
 - .6 Other documents as specified.

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

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 *Only applicable for working on main line tracks* - Contractor may apply for Line Closures 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 MEASUREMENT AND PAYMENT

- .1 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 in the Bid Schedule of the Bid Form, or incidental to the Work.

1.02 STAGES OF CONSTRUCTION

- .1 The Contractor shall take photographs at all construction milestones and at each of the following stages of construction:
 - .1 Before commencement of clearing and demolition;
 - .2 Upon completion of clearing and demolition;
 - .3 Anytime a problem arises that may result in a Notice of 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 approved by ONTC Representative.

1.03 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 Flash drive used to store photos shall be labeled to include the Contract number and the date the photographs were taken.

1.04 IDENTIFICATION OF PHOTOGRAPHS

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

1.05 VIDEO RECORDINGS

- .1 The Contractor shall provide video recordings to supplement contract photographs of certain construction milestones 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 District.
 - .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 The Flash drive shall be labelled with the same identifying information specified above for photographs.
 - .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".

2 PRODUCTS

- .1 Not Used

3 EXECUTION

- .1 Not Used

END OF SECTION

2023-10-24

ONTC MASTER CONSTRUCTION
SPECIFICATION

SECTION 01 32 33
PHOTOGRAPHIC DOCUMENTATION
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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.

- .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.
- .6 American National Standards Institute (ANSI):
 - .1 ANSI A10.3, Operations - Safety Requirements for Powder-Actuated Fastening Systems.

1.02 RELATED REQUIREMENTS

- .1 Section 01 33 00 - Submittal Procedures
- .2 Section 01 51 00 - Temporary Utilities
- .3 Section 01 56 00 - Temporary Barriers and Enclosures
- .4 ONTC Contractor Subcontractor Policy.
- .5 ONTC HOT WORK Program.
- .6 ONTC Electrical Safety Policy.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within [7] days after date of Notice to Proceed and prior to commencement of Work. 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 Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to ONTC Representative and authority having jurisdiction weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS Safety Data Sheets (SDS) and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.
- .7 Emergency Procedures.
- .7 ONTC Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to ONTC Representative 3 days after receipt of comments from ONTC Representative Consultant.
- .8 ONTC Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to ONTC Representative.

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 ONTC Representative.
- .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 Prepare and comply with a site-specific project Health and Safety Plan based on hazard assessment, including, but not limited to, the following:
 - .1 Primary requirements:
 - .1 Contractor's safety policy.
 - .2 Identification of applicable compliance obligations.

- .3 Definition of responsibilities for project safety/organization chart for project.
- .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 site 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 to the ONTC Representative.
- .5 ONTC Representative's review: the review 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 ONTC Representative prior to commencement of Work.
- .2 Attend all subsequent Health and Safety meetings called by the ONTC Representative.

1.07 REGULATORY REQUIREMENTS

- .1 Do 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.
- .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 Reference 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.

1.09 GENERAL REQUIREMENTS

- .1 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

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 **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.**
- .3 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.11 COMPLIANCE REQUIREMENTS

- .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.

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 ONTC Representative verbally and in writing.

1.13 HEALTH AND SAFETY CO-ORDINATOR

- .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 Be responsible for implementing, revising, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
- .3 Visit site regularly to ensure work is being completed in compliance with contractor's Health and Safety programs and all applicable laws and regulations.

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 ONTC Representative.
- .2 Post legible versions of the following documents on site:
 - .1 Site Specific Health and Safety Plan.
 - .2 Sequence of work.
 - .3 Emergency procedures.
 - .1 Site drawing showing project layout, locations of the first-aid station, marshalling stations, and emergency transportation provisions.
 - .4 Notice of Project.
 - .5 Site plans.
 - .6 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.
 - .7 Workplace Hazardous Materials Information System (WHMIS) documents.
 - .8 WHIMS Safety Data Sheets (SDS).
 - .9 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.

1.15 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by ONTC Representative.
- .2 Provide ONTC Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 ONTC Representative may stop Work if non-compliance of health and

safety regulations is not corrected. The General 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 ONTC Representative.

1.17 POWDER ACTUATED DEVICES

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

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.
- .1 Before undertaking any work, coordinate required energizing and de-energizing of new and existing circuits with ONTCde Representative.
- .2 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 ONTC Representative.
- .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 ONTC Representative or by any authorized safety representative.

1.20 WORK STOPPAGE

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

2 PRODUCTS

2.01 NOT USED

- .1 Not used.

3 EXECUTION

3.01 NOT USED

.1 Not used.

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 National Research Council of Canada (NRC):
 - .1 National Building Code of Canada (NBC), [2015]
 - .2 National Fire Code of Canada (NFC), [2015]
- .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

1.02 CONSTRUCTION FIRE SAFETY

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

1.03 FIRE DEPARTMENT BRIEFING

- .1 NOT USED

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit fire safety plan 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.
 - .2 Telephone the Fire Department
 - .1 Telephone:911
 - .2 Contact ONTC Rep.
- .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 ONTC Representative of fire incidents at Work site,

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 the Work site before beginning Work on site.
- .2 Submit fire safety plan to ONTC representative who will submit to local fire department for their review. Implement recommendations from local fire department into fire safety plan.
- .3 Limit scope of fire safety plan to Work site area only. Existing fire safety plans covering other existing buildings are not the responsibility of this construction contract.
- .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 Work site or near each Work site's health and safety board.
- .6 Review fire safety plan a maximum of every 12 months to ensure it takes into account changes in the use and other characteristics of the building. Revise fire safety plan when it can be improved.

1.07 FIRE WARNING SYSTEM

- .1 Provide a fire warning system for entire Work site, capable of notifying construction personnel of a fire emergency in construction area.
- .2 Provide a fire warning system with sufficient coverage so that

alarms are capable of being heard throughout building and everywhere on site.

1.08 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 ONTC Representative.
- .4 Submit written notification to ONTC Representative 48 hours 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 Senior Firefighter.
- .6 Where systems are affected or impaired during the Work, conduct work on fire protection system in accordance with NFC.

1.09 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 Senior Firefighter.
- .4 Provide dry chemical type extinguishers unless otherwise required by hazard being protected.
- .5 Provide a sufficient number of portable extinguishers based on a maximum travel distance between fire extinguishers of 22.9 m.
- .6 Inspect and maintain extinguishers in accordance with NFC.

1.10 ACCESS FOR FIRE FIGHTING

- .1 Provide and maintain access for firefighting operations in accordance with NFC.
- .2 Submit written notification to ONTC Representative a minimum of five Working Days before operation of activities that may cause problems that might impede fire department equipment access and personnel response including
 - .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 ONTC Representative.
- .4 Maintain a minimum 5.0-m vertical clearance for access routes, or as otherwise directed by ONTC Representative.

1.12 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.

1.13 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 Work site at end of each Working Day or shift, or more frequently when directed by Senior Firefighter.
 - .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.

1.14 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 Handle, store, and use flammable and combustible liquids in accordance with NFC or as otherwise directed by the Senior Firefighter.
- .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 Senior Firefighter 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 Senior Fire fighter.

1.15 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 Senior Firefighter.
- .2 Obtain a Hot Works permit 48 hours in advance from ONTC Representative for hot works in work area. Frequency of renewal for hot works permits is at discretion of the ONTC Representative use of heat, 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 ONTC Representative.
- .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 ONTC Representative.

- .3 Conduct a final inspection of area not less than 4 hours after completion of hot works, unless otherwise directed by Senior Firefighter.
- .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 ONTC Representative.
- .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 ONTC Representative.

1.16 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 ONTC Representative Ca minimum five days before starting Work and immediately at completion of Work.

1.17 PARTIAL OCCUPANCY PROCEDURES

- .1 Implement partial occupancy procedures as required. Partial occupancy is defined as a Work site adjacent to an area occupied by ONTC. This includes:
 - .1 Phased new construction
 - .2 Early or partial occupancy of new construction
 - .3 New construction being added onto an existing building
 - .4 Renovation or recapitalization of an existing building
 - .5 Phased renovation or recapitalization of an existing building
- .2 Where partial occupancy occurs, implement requirements as indicated in Plans (drawings) and Specifications. This may include temporary

construction of a rated fire separation between occupied and construction areas as required by NFC.

- .3 If Work occurs in an occupied building, perform fire watch at least every hour, throughout entire site during period of demolition.
- .4 If Work occurs in an occupied building and where building does not have a Fire Alarm system or similar automatic monitoring or protection equipment, perform inspections every hour for entire period of construction.

1.18 QUESTIONS OR CLARIFICATION

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

1.19 FIRE INSPECTION

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

2 PRODUCTS

2.01 NOT USED

- .1 NOT USED

3 EXECUTION

3.01 ATTACHMENTS

- .1 ONTC HOT WORK PROGRAM

END OF SECTION

1 GENERAL

1.01 REFERENCE STANDARDS

- .1 Not used.

1.02 DEFINITIONS

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

1.03 RELATED REQUIREMENTS

- .1 Not used.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for all products and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit WHMIS Safety Data Sheets (SDS).
- .3 Sustainable Design Submittals:
 - .1 Not used.
- .4 Submit Environmental Protection Plan (EPP) for review and approval by ONTC Representative before delivering materials to site or commencing construction activities.
- .5 EPP shall include comprehensive overview of known or potential environmental issues to be addressed on site during construction.
- .6 Address topics at level of detail commensurate with environmental issue and required construction task [s] .
- .7 Include in Environmental Protection Plan (EPP):
 - .1 Name [s] of person [s] responsible for ensuring adherence to EPP.
 - .2 Name [s] and qualifications of person [s] responsible for manifesting hazardous waste to be removed from site.
 - .3 Name [s] and qualifications of person [s] responsible for training site personnel.
 - .4 Descriptions of environmental protection personnel training

program.

- .5 Submit a site-specific Stormwater Pollution Prevention Plan (SPPP) in accordance with EPA-833-R-06-004 . Include the site-specific Erosion and Sediment Control Plan (ESCP) identifying the type and location of erosion and sediment control measures to be provided on site. Include monitoring and reporting requirements to ensure that ESC control measures are in compliance with erosion and sediment control plan, Federal and Provincial regulations, and Municipal by-laws.
- .6 Submit drawings indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
- .7 Submit a site-specific Traffic Control Plan (TCP) including measures to reduce erosion of [temporary] [and] [existing] roadbeds by construction traffic, especially during wet weather.
 - .1 TCP to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.
- .8 Submit a Site Work Plan (SWP) showing work areas for proposed activities in each portion of area and identifying areas of limited use or non-use.
 - .1 SWP to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
- .9 Submit a Spill Control Plan (SCP) including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
- .10 Submit a Solid Waste Disposal Plan (SWDP) for non-hazardous solid wastes identifying methods and locations for solid waste disposal including clearing debris.
- .11 Submit an Air Pollution Control Plan (APCP) detailing provisions to ensure that dust, debris, materials, and trash, are contained within the project site.
- .12 Submit a site-specific Contaminant Prevention Plan (CPP) identifying the proper procedures and actions to be implemented to prevent potentially or expected hazardous substances due to the presence of any hazardous substances within the project site. The intent of the CPP is to:
 - .1 Prevent introduction of designated substances (DS) into air, water, or ground;
 - .2 Detail provisions for storage and handling of these materials in compliance with Federal, Provincial, and Municipal laws.
- .13 Submit a Wastewater Management Plan (WMP) identifying methods

and procedures for management [and] [or] discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.

- .14 Submit an Identification and Protection Plan (IPP) that defines procedures for identifying and protecting historical, archaeological, cultural and biological resources and wetlands.
- .15 Submit a Pesticide Treatment Plan (PTP) identifying the presence of any pesticides within the site. PTP to be updated as required.

1.05 FIRES

- .1 Fires and burning of rubbish on site are not permitted.

1.06 DRAINAGE

- .1 Ensure that the ESCP measures are provided and that its recommendations are followed on site, in accordance with the site-specific SPPP, at all times during construction.
- .2 Provide temporary drainage and pumping as required to keep excavations on site free of standing water.
 - .1 Obtain ONTC Representative approval before pumping standing water, which is free of suspended materials, into waterways, sewer or drainage systems.
 - .2 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with the site-specific SPPP in compliance with the requirements of authorities having jurisdiction.
 - .3 Do not pump water containing suspended materials into waterways, sewer or drainage systems.

1.07 SITE CLEARING AND PLANT PROTECTION

- .1 Protect trees and plants on site and adjacent properties.
- .2 Protect trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of two (2) m minimum. Ensure that control measures used for protection are in compliance with Municipal laws and regulations.
- .3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage.
 - .1 Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas indicated or designated by ONTC Representative. Obtain permits before trees removal in accordance

with the requirements of the authorities having jurisdiction.

1.08 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Keep waterways free of excavated fill, waste material and debris.
- .4 Design and construct temporary crossings to minimize waterways erosion.
- .5 Do not skid logs or construction materials across waterways.
- .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
- .7 Do not blast underwater or within 100 m of indicated spawning beds.

1.09 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this Contract in accordance with site-specific SPPP.
- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements. Check with local authorities for any environmental compliance requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.
 - .1 Provide temporary enclosures where as directed by ONTC Representative.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.10 HISTORICAL/ARCHAEOLOGICAL CONTROL

- .1 Refer to the site-specific IPP for procedures in identifying and protecting historical and archaeological resources previously known to be on project site or discovered during construction.
 - .1 Plan to include methods to ensure protection of known or discovered resources and identify lines of communication between Contractor personnel and ONTC Representative.

1.11 NOTIFICATION

- .1 ONTC Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial environmental laws and regulations or Municipal environmental bylaws, permits, and other elements of site-specific plans, such as [EPP] , [SPPP] , [TCP] , [SCP] , [SWDP] , [APCP] , [CPP] , [WMP] , [PTP] and [IPP] as applicable.
- .2 Contractor after receipt of such notice, shall inform ONTC Representative of proposed corrective action and take such action to obtain the their approval.

- .1 Take action only after receipt of written approval by ONTC Representative
- .3 ONTC Representative will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 CLEANING

- .1 Leave Work area clean at end of each day.
- .2 Burying rubbish and waste materials on site is not permitted.
- .3 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .4 Proceed with final cleaning upon completion and removal of surplus materials, rubbish, tools and equipment.
- .5 Waste Management: separate waste materials for recycling.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

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 **Municipal building permit is not required.**
 - .2 If required, MTO Building and Land Use Permits will be obtained by the Owner.
 - .3 Obtain and pay for all other required Certificates, Licenses and other permits required by regulatory municipal, provincial or federal authorities to complete the Work.
 - .4 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.
 - .5 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.

- .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 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 (seacans, 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.

- .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 General Standards Board (CGSB)
 - .1 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
 - .2 CAN/CGSB 1.189-[00], Exterior Alkyd Primer for Wood.
- .2 CSA Group (CSA)
 - .1 CSA-O121-[M1978(R2003)], Douglas Fir Plywood.

1.02 RELATED REQUIREMENTS

- .1 Section [_____].

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 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 around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
- .2 Provide as required by governing authorities.

1.06 WEATHER ENCLOSURES

- .1 Provide weather tight closures to unfinished door and window openings, tops of shafts 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.

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 BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with ONTC Representative locations and installation schedule [3] 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 - Cleaning and Waste Management and Disposal.

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 REFERENCE STANDARDS

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

1.02 RELATED REQUIREMENTS

- .1 Not used.

1.03 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by ONTC Representative. Do not burn waste materials on site, unless approved by ONTC Representative.
- .3 Clear snow and ice from access to building, bank/pile snow in designated areas only, or remove from site, as agreed upon at outset of contract.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site steel containers for collection of waste materials and debris.
- .6 Provide and use marked separate bins for recycling. Refer to Section 1 74 19 - Waste Management and Disposal.
- .7 Dispose of waste materials and debris at designated dumping areas off site.
- .8 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .9 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .10 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .12 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.04 FINAL CLEANING

- .2 When Work is Substantially Performed remove surplus products, tools,

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

1.05 WASTE MANAGEMENT AND DISPOSAL

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

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 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 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 33 00 - Submittal Procedures
- .2 Section 01 51 00 - Temporary Utilities
- .3 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 Construction Waste Management Plan are followed.
- .2 Preconstruction Meeting: Arrange a pre-construction meeting in accordance with Section 01 31 19 - Project Meetings before starting any Work of the Contract attended by the Owner, Contractor, affected Subcontractor's and ONTC Representative to discuss the Contractors Construction 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 before starting any work of this Section:
 - .1 Draft Construction Waste Management Plan (Draft CWM Plan):

Submit to ONTC Representative 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; ONTC Representative will provide commentary before development of Contractor's Construction Waste Management Plan.

- .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 Draft CWM Plan 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 CWM Plan.
- .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 Construction Waste Management Report (CWM 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.
- .5 Alternative Daily Cover (ADC): Submit quantities of material that were used as ADC at landfill sites, and that form a part of the total waste generated by the Project.
- .6 Photographs: Submit photographs of waste diversion facilities documenting location and signage describing usage of waste separation containers.

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 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 (CWM PLAN) IMPLEMENTATION

- .1 Manager: Contractor is responsible for designating an on site party or parties responsible for instructing workers and overseeing and documenting results of the CWM Plan for the Project.
- .2 Distribution: Distribute copies of the CWM Plan to the job site foreman, each Subcontractor , the Owner, the ONTC Representative and other site personnel as required to maintain CWM Plan.
- .3 Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, composting and return methods being used for the Project to Subcontractors at appropriate stages of the Project.
- .4 Separation Facilities: Lay out 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 Progressive Documentation: Submit a monthly summary of waste generated by the Project to ensure that waste diversion goals are on track with Project requirements:
 - .1 Submittal of waste summary can coincide with application for progress payment, or similar milestone event as agreed upon between the Owner, ONTC Representative.
 - .2 Monthly waste summary shall contain the following information:
 - .1 The amount in tonnes or m ³ and location of material landfilled,
 - .2 The amount in tonnes or m ³ 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 SUBCONTRACTOR'S RESPONSIBILITY

- .1 Subcontractor's shall cooperate fully with the Prime Contractor to implement the CWM Plan.
- .2 Failure to cooperate may result in the Owner not achieving their environmental goals, and may result in penalties being assessed by the Contractor to the responsible Subcontractor's.

END OF SECTION

SPEC NOTE: DESCRIPTION: This Section specifies demolition of structures, parts of structures, basements and foundation walls. It does not include the removal of septic tanks and tanks containing petroleum products. Use Section 02 65 00 - Underground Storage Tank Removal.

SPEC NOTE: SUSTAINABILITY: This Section outlines the requirements to integrate sustainability aspects such as low carbon, water, materials, plastics and construction waste disposal into projects. Refer to the sustainability commitments laid out in the following documents: The Greening Government Strategy, the Ocean Plastics Charter – Government of Canada actions on plastic waste in federal operations, and PSPC's Departmental Sustainable Development Strategy: 2020-2023.

SPEC NOTE: If selective demolition is to be a separate contract, ensure the Contract includes appropriate Sections of Division 1 to cover such items as site access and restrictions, worker and public protection, safety, security, drainage, insurance, permits, and other items in Related REQUIREMENTS article. For sitework demolition and removal, use Section 02 41 13 - Selective Site Demolition.

1 GENERAL

SPEC NOTE: Use of aerial space may be required for swinging cranes or outriggers. Ensure aerial space requirements are specified in appropriate Section of Division 1.

SPEC NOTE: If structure to be demolished is to interfere with foundations of adjacent structures specify in Division 1 that Contractor take photographs of adjacent structures before commencing selective demolition.

SPEC NOTE: If garbage chutes, weather and dust barriers or partitions, site enclosure for public safety are required ensure that they are added to Section 01 51 00 - Temporary Utilities.

1.01 SUMMARY

- .1 This Section includes requirements for the following:
 - .1 Demolition and removal of buildings and structures.
 - .2 Demolition and removal of site improvements adjacent to a building or structure being demolished.
 - .3 Demolition [and removal] of concrete foundations [and piles].
 - .4 [Abandoning in place] [Removing] below grade construction.
 - .5 Disconnecting, capping or sealing, and [abandoning in place] [removing] site utilities.
- .2 This Section does not include for the removal of Hazardous Substances or asbestos abatement, or selective demolition of interior building components and finishes.
- .3 Drawings contain details that suggest directions for solving some of the major demolition and removal requirements for this Project [; Contractor representative is required to develop these details further by submitting a demolition plan prepared by a professional engineer].

1.02 RELATED REQUIREMENTS

SPEC NOTE: List other Sections that are referenced in this Section that contain specific information that the reader might expect to find in this Section, but is specified elsewhere. Typically, this list does not include Division 00 or Division 01 Sections.

SPEC NOTE: Coordinate with Section 02 50 00 - Site Remediation where contaminated soils are expected or encountered on the project site and add requirements for soil removal and disposal, or other remediation measures required to decontaminate the site.

- .1 Section [_____]
- .2 Section 02 65 00 - Underground Storage Tank Removal
- .3 Section 02 81 00 - Hazardous Materials
- .4 Section 31 00 00.01 - Earthwork - Short Form
- .5 Section 33 71 73.02 - Underground Electrical Service

1.03 DEFINITIONS

- .1 Demolition: Rapid destruction of building following removal of Hazardous Substances.
- .2 Hazardous Substances: Dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: asbestos PCB's, CFC's, HCFC's poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or wellbeing or environment if handled improperly as defined by the federal Hazardous Products Act including latest amendments.
- .3 [Waste Management Coordinator (WMC): Contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements].
- .4 Draft Construction Waste Management Plan (Draft CWM Plan): Detailed inventory of materials in building indicating estimated quantities of reuse, recycling and landfill, prepared in accordance with Section 01 74 19 - Waste Management and Disposal and as follows:
 - .1 Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project.
- .5 Construction Waste Management Plan (CWM Plan): Written plan addressing opportunities for reduction, reuse, or recycling of materials prepared in accordance with Section 01 74 19 - Waste Management and Disposal.
- .6 Construction Waste Management Report (CWM Report): Written report identifying actual materials that formed CWM Plan for reduction, reuse, or recycling of materials prepared in accordance with Section 01 74 19 - Waste Management and Disposal.

1.04 REFERENCE STANDARDS

SPEC NOTE: List standards referenced within this Section.

SPEC NOTE: Specification writer may refer to the National Building Code of Canada (NBC), Part 8 - Safety Measures at Construction and Demolition Sites (2015) and with local authority having jurisdiction

- .1 CSA Group (CSA):
 - .1 CSA S350- [M1980], Code of Practice for Safety in Demolition of Structures
- .2 Department of Justice Canada (Jus):
 - .1 Canadian Environmental Protection Act (CEPA), 1999
 - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations
 - .2 SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations
 - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34
 - .4 Motor Vehicle Safety Act (MVSA), 1995
 - .5 Hazardous Substances Information Review Act, 1985
 - .2 Hazardous Products Act, RSC 1985, c H-3
- .3 National Fire Protection Association (NFPA)
 - .1 NFPA 241-[21], Standard for Safeguarding Construction, Alteration, and Demolition Operations
- .4 National Research Council Canada (NRC):
 - .1 National Building Code of Canada [2020] (NBC)
- .5 Underwriters' Laboratories of Canada (ULC):
 - .1 CAN/ULC-S660- [08], Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids
 - .2 ULC/ORD-C58.15- [1992], Overfill Protection Devices for Flammable Liquid Storage Tanks
 - .3 ULC/ORD-C58.19- [1992], Spill Containment Devices for Underground Flammable Liquid Storage Tanks

1.05 ADMINISTRATIVE REQUIREMENTS

SPEC NOTE: Edit the following paragraphs for this specific project.

- .1 Coordination: Coordinate with [Departmental Representative] [DCC Representative] [Consultant] [Owner] for the material ownership as follows:
 - .1 Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain [[____]] [Owner]'s property, demolished materials shall become [Contractor]'s property and shall be removed from Project site.
 - .2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to [[____]] [Owner] that may be encountered during demolition remain [[____]] [Owner]'s property:
 - .1 Carefully remove and salvage each item or object in a manner

to prevent damage and deliver promptly to [Departmental Representative] [DCC Representative] [Consultant] [Owner].

- .2 Coordinate with [Departmental Representative] [DCC Representative] [Consultant] [Owner]'s [historical adviser], who will establish special procedures for removal and salvage operations.

.2 Pre-Demolition Meetings:

- .1 Convene pre-installation meeting [1] week before beginning [work of this Section], with [Contractor] [and] [Departmental Representative] [DCC Representative] [Consultant] in accordance with Section 01 31 19 - Project Meetings to:
 - .1 Verify project requirements.
 - .2 Verify existing site conditions adjacent to demolition work.
 - .3 Coordination with other construction subtrades.
- .2 Hold project meetings every [week] [month].
- .3 Ensure [key personnel] [site supervisor] [project manager] [Subcontractor] [WMC] attend.
- .4 [WMC] must provide [written] [verbal] report on status of waste diversion activity at each meeting.
- .5 [Departmental Representative] [DCC Representative] [Consultant] will provide [written] [verbal] notification of change to meeting schedule established upon contract award [24] hours before scheduled meeting.

.3 Scheduling:

- .1 [Employ necessary means to] meet project time lines without compromising specified minimum rates of material diversion.
 - .1 In event of unforeseen delay notify [Departmental Representative] [DCC Representative] [Consultant] [in writing].

1.06 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Shop Drawings: Submit drawings stamped and signed by professional engineer registered or licensed in [Province] [Territory] as follows:
 - .1 Submit for review and approval demolition drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning.
 - .2 Submit in accordance with Section 01 33 00 - Submittal Procedures[and Section [01 74 19 - Waste Management Disposal]].
 - .3 WMC is responsible for fulfilment of reporting requirements.

SPEC NOTE: Include schedule below where it is necessary to track

Contractor's progress and to determine that demolition does not interfere with Owner's operations. Delete schedule submittal if not required or if demolition will not interfere with Owner's operations.

- .4 Schedule of Demolition Activities: Coordinate with Section [01 32 16.16 - Construction Progress Schedule - Critical Path Method (CPM)], and indicate the following:
 - .1 Detailed sequence of demolition and removal work, with starting and ending dates for each activity
 - .2 Interruption of utility services
 - .3 Coordination for shutoff, capping, and continuation of utility services
 - .4 Locations of temporary partitions and means of egress
- .5 Demolition Plan: Submit a plan of demolition area indicating extent of temporary facilities and supports, methods of removal and demolition prepared by a professional engineer in accordance with requirements of Authority Having Jurisdiction.

SPEC NOTE: Include article below where structure demolition is concurrent with Owner occupying areas adjacent to areas of demolition.

- .6 Proposed [Dust Control] [and] [Noise Control] Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation.
- .7 Inventory: Submit a list of items that have been removed and salvaged after demolition is complete.

SPEC NOTE: Delete article below where structure demolition is concurrent with Owner occupying areas adjacent to areas of demolition.

- .1 Landfill Records: Indicate receipt and acceptance of [hazardous wastes by a landfill facility licensed to accept hazardous wastes].
 - .2 Pre-demolition [Photographs] [or] [Videotape]: Submit [photographs] [or] [videotape] indicating existing conditions of adjoining construction and site improvements before starting Work. Include finish surfaces that may be misconstrued as damage caused by demolition operations.
- .2 Informational Submittals: Provide the following submittals when requested by the Consultant:
 - .1 Certificates: Submit Statement of Refrigerant Recovery as follows:
 - .1 Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to regulations of Authority Having Jurisdiction.
 - .2 Include name and address of technician and date refrigerant was recovered.

- .2 Qualification Data: Submit information for companies and personnel indicating their capabilities and experience to perform work of this Section including; but not limited to, lists of completed projects with project names and addresses, names and addresses of [Departmental Representative] [DCC Representative] [Consultant], for work of similar complexity and extent.
- .3 Sustainable Design Submittals:
 - .1 LEED Submittals: In accordance with Section [01 35 21 - LEED Requirements].
 - .2 Construction Waste Management: Submit project [CWM Plan] highlighting recycling and salvage requirements in accordance with Section [01 74 19 - Waste Management and Disposal], and as follows:

SPEC NOTE: Option 1, Path 2 and Option 2 have potential to generate 2 Points to this MR Credit component, and can be listed together as potential approaches for the Contractor. Option 1, Path 1 is good for 1 Point contribution to the MR Credit.

- .1 LEED Diversion Method: Based on LEED MR Credit [Option 1, Path 2 to generate a minimum of 75% of total waste diversion and four (4) material streams that will be targeted for alternative disposal methods] [or] [Option 2 to generate less than 12.2 kg of construction waste per m² of building floor area] [Option 1, Path 1 to divert a minimum of 50% of total waste diversion and three (3) material streams that will be targeted for alternative waste disposal methods].

1.07 QUALITY ASSURANCE

- .1 Regulatory Requirements: Ensure Work is performed in compliance with [CEPA,] [CEAA,] [TDGA,] [and] [applicable Provincial/Territorial and Municipal regulations].
 - .1 Comply with hauling and disposal regulations of Authority Having Jurisdiction.
 - .2 Standards: Comply with ANSI A10.6 and NFPA 241
- .2 Regulatory Requirements: Perform work of this Section in accordance with the following:

SPEC NOTE: Select the appropriate Workers' Compensation reference. Provincial boards or commissions can be obtained from the [Association of Workers' Compensation Boards of Canada \(AWCBC\) website](https://awcbc.org/en/boardscommissions/) <https://awcbc.org/en/boardscommissions/>.

- .1 [Federal Workers' Compensation Service] [Provincial/Territorial Workers' Compensation Boards/Commissions].

SPEC NOTE: Select the appropriate Occupational Health and Safety Program reference and include as a reference standard. Provincial/Territorial programs can be obtained from the [Canadian Centre for Occupational Health and Safety \(CCOHS\) website](#)

<http://www.ccohs.ca/oshanswers/information/govt.html>.

- .2 [Government of Canada, Labour Program: Workplace Safety]
[Provincial/Territorial Occupational Health and Safety Standards
and Programs].

1.08 SITE CONDITIONS

SPEC NOTE: Retain, revise, or delete paragraphs and subparagraphs in this Article to suit Project. Add other limitations if necessary.

- .1 Environmental protection:
 - .1 Ensure Work is done in accordance with Section [01 35 43 - Environmental Procedures].
 - .2 Ensure Work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
 - .3 Fires and burning of waste or materials is not permitted on site.
 - .4 Do not bury rubbish waste materials.
 - .5 Do not dispose of waste or volatile materials including but not limited to: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.
 - .6 Ensure proper disposal procedures are maintained throughout project.
- .2 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with [authorities having jurisdiction] [as directed by [Departmental Representative] [DCC Representative] [Consultant]].
- .4 Protect trees, plants and foliage on site and adjacent properties where indicated.
- .5 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.
- .6 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all temporary roads.
- .7 [[____]] [Owner] will occupy another building immediately adjacent to demolition area.
- .8 Conduct structure demolition so [[____]] [Owner]'s operations will not be disrupted:
 - .1 Provide not less than [72] hours' notice to [[____]] [Owner] of activities that will affect operations.
 - .2 Maintain access to existing walkways, exits, and other adjacent occupied or used facilities:

- .1 Do not close or obstruct walkways, exits, or other occupied or used facilities without written permission from [Departmental Representative] [DCC Representative] [Consultant] [Authority Having Jurisdiction].
- .9 [Departmental Representative] [DCC Representative] [Consultant] assumes no responsibility for buildings and structures being demolished:

SPEC NOTE: Review first subparagraph below and revise if necessary. In second subparagraph, include list of items that will be removed by.

- .1 Conditions existing at time of inspection for bidding purpose will be maintained by [[____]] [Owner] as far as practical.
- .2 Remove, protect and store salvaged items as directed by [Departmental Representative] [DCC Representative] [Consultant] before structure demolition.
- .3 Salvage items as identified by [Departmental Representative] [DCC Representative] [Consultant].
- .4 Deliver to [Departmental Representative] [DCC Representative] [Consultant] [Owner] as directed.

1.09 EXISTING CONDITIONS

- .1 Existing Conditions: Condition of materials identified as being salvaged or demolished are based on their observed condition [on date that tender is accepted] [at time of site examination before tendering].

SPEC NOTE: Use the following paragraph when the hazardous substances report determines that the presence of any potentially hazardous and contaminated materials do not exist on site.

- .1 Existing Hazardous Substances: [[____]] [Owner] performed a hazardous substances assessment and it is not expected that hazardous substances will be encountered in the Work [____]:

SPEC NOTE: Use the following paragraph when the hazardous substance report determines that potentially hazardous and contaminated materials are present on site.

SPEC NOTE: Select the following paragraph when hazardous substance abatement will be completed before starting the Work of the Project. Generally, removal of hazardous substance should be completed before starting any work, but can also form a part of the work of the contract where directed by the Representative or Owner.

- .1 Hazardous substances will be removed by a hazardous abatement specialist engaged by the [[____]] [Owner] before start of the Work.
- .2 Existing Hazardous Substances: [[____]] [Owner] has performed a hazardous substances assessment and identified materials requiring abatement as follows:

- .1 Hazardous substances are as defined in the Hazardous Products Act.
SPEC NOTE: Select the following paragraph when hazardous substance abatement will form a part of the Work of the Project. Obtain appropriate hazardous substance abatement specialist input and specification assistance when hazardous substances are being removed as a part of the contract, where the specifier does not have appropriate knowledge to complete these technical specifications.
- .2 Hazardous substances will be removed by the [Contractor] as a part of the Contract before starting Work in accordance with work results described in Related Requirements listed above.
- .3 Discovery of Hazardous Substances: Immediately notify [Departmental Representative] [DCC Representative] [Consultant] if materials suspected of containing hazardous substances are encountered and perform the following activities:
 - .1 Hazardous substances will be as defined in the Hazardous Products Act.
 - .2 Stop work in the area of the suspected hazardous substances.
 - .3 Take preventative measures to limit users' and workers' exposure, provide barriers and other safety devices and do not disturb.
 - .4 Hazardous substances will be removed by [[____]] [Owner] under a separate contract or as a change to the Work.
 - .5 Proceed only after written instructions have been received from [Departmental Representative] [DCC Representative] [Consultant].

2 PRODUCTS

2.01 EQUIPMENT

SPEC NOTE: Selection of material and equipment for demolition of structures is normally responsibility of Contractor. If specific material or equipment is required, specify accordingly.

- .1 Equipment and Heavy Machinery:
 - .1 On-road vehicles to: [CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations] [and] [CEPA-SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations].
 - .2 Off-road vehicles to: [EPA CFR 86.098-10] [and] [EPA CFR 86.098-11].
 - .3 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

2.02 TEMPORARY SUPPORT STRUCTURES

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

2.03 SOIL MATERIALS

- .1 Satisfactory Soils: Provide soil in accordance with Section [31 00 00.01 - Earthwork - Short Form].

3 EXECUTION

3.01 EXAMINATION

- .1 Survey existing conditions and correlate with requirements indicated to determine extent of structure demolition required.

SPEC NOTE: Retain first paragraph below if available.

- .2 Review Project Record Documents of existing construction provided by [Departmental Representative] [DCC Representative] [Consultant].
- .3 [Departmental Representative] [DCC Representative] [Consultant] does not guaranty that existing conditions are the same as those indicated in Project Record Documents.
- .4 Inventory and record the condition of items being removed and salvaged.
- .5 When unanticipated mechanical, electrical, or structural elements are encountered, investigate and measure the nature and extent of the element.
- .6 Promptly submit a written report to [Departmental Representative] [DCC Representative] [Consultant].

SPEC NOTE: Usually retain first option in paragraph below. Occupational Health and Safety Act regulations require that a "competent person" perform an engineering survey before structure demolition begins.

- .7 [Perform] [Engage a professional engineer to perform] an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during structure demolition operations.

SPEC NOTE: Retain below if hazardous material remediation is part of the Work of this Contract.

- .8 Verify that Hazardous Substances have been remediated before proceeding with structure demolition operations.

3.02 PREPARATION

SPEC NOTE: If underpinning and shoring is required, specify in appropriate Sections. For small projects, incorporate appropriate text here.

- .1 Protection of in-place conditions:
 - .1 Work in accordance with Section [01 35 43 - Environmental Procedures] [and] [Erosion and Sedimentation Control Plan] [and] [Stormwater Pollution Prevention Plan].
 - .2 Prevent movement, settlement or damage of adjacent [structures,]

[services,] [walks,] [paving,] [trees,] [landscaping,] [adjacent grades] [properties] [parts of existing building to remain].

- .1 Provide bracing, shoring [and underpinning] as required.
- .2 Repair damage caused by demolition as directed by [Departmental Representative] [DCC Representative] [Consultant].
- .3 Support affected structures and, if safety of structure being demolished [or] [adjacent structures] [or services] appears to be endangered, take preventative measures, stop Work and immediately notify [Departmental Representative] [DCC Representative] [Consultant] and [Owner].
- .4 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.

SPEC NOTE: Coordinate following paragraphs and subparagraphs below with requirements specified in Divisions 22-23 and 26.

.2 Surface Preparation:

- .1 Disconnect [and re-route] electrical and telephone service lines entering buildings to be demolished.
 - .1 Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.

SPEC NOTE: Carefully check drawings, and edit the following paragraphs to suit project.

- .2 Disconnect and cap [designated] mechanical services.
 - .1 Natural gas supply lines: remove in accordance with gas company requirements.
 - .2 Sewer and water lines: remove [to property line] [in accordance with authority having jurisdiction] [as directed by [Departmental Representative] [DCC Representative] [Consultant]].
 - .3 Other underground services: remove and dispose of [as indicated] [as directed by [Departmental Representative] [DCC Representative] [Consultant]] in accordance with Section [33 71 73.02 - Underground Electrical Service].
- .3 Septic Tanks:
 - .1 Pump out buried septic tanks, left in place. Fill with sand.
 - .2 Remove tanks [within area of new construction or under paved areas and slabs].
 - .3 [Removal] [abandon-in-place] in accordance with CCME, Code of Practice PN 1326
- .4 Underground storage tanks and piping: Remove and dispose in accordance with Section [02 65 00 - Underground Storage Tank Removal] [as directed] [and] [CCME PN 1326] [ULC/ORD-S660]

[ULC/ORD-C58.15] [and] [ULC/ORD-C58.19].

- .5 Do not disrupt active or energized utilities [traversing premises] [designated to remain undisturbed].
- .6 Remove rodents and vermin.

3.03 DEMOLITION

- .1 Protect demolition work in accordance with Section [01 56 00 - Temporary Barriers and Enclosures].
- .2 Blasting operations [not] permitted during demolition.

SPEC NOTE: Delete the following paragraph if not applicable. Specifier to use applicable text from Section 31 23 16.26 - Rock Removal, as required.

- .3 Do blasting operations in accordance with CSA S350.
- .4 Remove contaminated or dangerous materials as defined by authorities having jurisdiction, relating to environmental protection, from site and dispose of in safe manner to minimize danger at site or during disposal.
- .5 Before start of Work remove contaminated or hazardous materials [listed as hazardous] [as defined by authorities having jurisdiction] [as directed by [Departmental Representative] [DCC Representative] [Consultant]] from site and dispose of [at designated disposal facilities] in safe manner and in accordance with [TDGA and other applicable requirements] [and] [[Section 02 81 00 - Hazardous Materials]]. Refer Existing Conditions in PART 1.

SPEC NOTE: Include removal of equipment and services, if applicable.

- .6 Demolish [parts of] [structure] [structures].
- .7 To permit [construction of addition] [and] [as indicated].
- .8 Crush concrete generated due to demolition of foundations to size [suitable for recycling] [as directed].
 - .1 [Where possible] identify markets which will accept crushed material as aggregate.
 - .2 For further information regarding acceptable uses contact [Provincial / Territorial aggregate producers associations] [Ministries of Transportation].
- .9 Demolish [basement] [foundation] walls to minimum of [_____] mm below finished grade [beyond area of new construction].
- .10 Demolish [basement] [foundation] walls and footings, [and concrete floors below or on grade] [within areas of new construction].

SPEC NOTE: Use the following paragraph only when basement slabs are not to be removed.

- .11 Break [[_____] mm holes] [[one] [_____] mm hole [s] per [_____] m² area] in concrete slabs [below grade] which are not to be removed, to prevent accumulation of water.

- .1 [Keep floor drains open if permanent drainage still connected].

SPEC NOTE: Removal of demolition rubble in open basements or excavations is normally done by excavator. Before specifying following paragraph check geotechnical reports.

- .12 [Use as backfill in open [basements] [or] [excavations] provided voids are filled]. Remove from open [basements] [or] [excavations] pieces of concrete and masonry not larger than [_____] mm broken from demolition work.
 - .1 [Keep demolition fill [_____] mm below finished grade level].
 - .2 Do not backfill basement areas until inspected by [Departmental Representative] [DCC Representative] [Consultant].
- .13 Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as work progresses.
- .14 At end of each day's work, leave Work in safe and stable condition.
 - .1 [Protect interiors of parts not to be demolished from exterior elements at all times].
- .15 Demolish to minimize dusting. Keep materials wetted as directed by [Departmental Representative] [DCC Representative] [Consultant].

SPEC NOTE: Use the following paragraph when demolished masonry and concrete are to be specified for reuse.

- .16 Demolish masonry and concrete walls [in pieces suitable for reuse as specified].
- .17 Remove structural framing.
- .18 Contain fibrous materials to minimize release of airborne fibres while being transported within facility.
- .19 Only dispose of material specified by selected alternative disposal option [as directed by [Departmental Representative] [DCC Representative] [Consultant]] [for own use].
 - .1 [Additional disposal options to be provided by [Departmental Representative] [DCC Representative's] [Consultant's], on-site waste diversion representative before disposal].
- .20 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

SPEC NOTE: Provide list of materials and equipment, instructions re location. Check Divisions 21 and 26 for removal and re-use of mechanical and electrical materials and equipment.

- .21 Remove following materials and equipment, store, protect, and [reinstall in new building, using qualified tradesmen] [leave ready for installation by other Sections of Work]:
 - .1 [_____].

SPEC NOTE: List fixtures, materials and equipment to be retained by

Departmental Representative/DCC Representative/Consultant. Check Division 21, 23 and 26 for removal of mechanical and electrical materials and equipment. Provide instruction regarding delivery of such materials.

- .22 Remove following materials and equipment [and store in location designated by [Departmental Representative] [DCC Representative] [Consultant]]:
 - .1 [_____].
- .23 Use natural lighting to do Work where possible.
 - .1 Shut off lighting except those required for security purposes at end of each day.

3.04 SITE RESTORATION

- .1 Below Grade Areas: Rough grade below grade areas ready for further excavation or new construction.

SPEC NOTE: Retain paragraph above or first paragraph below; coordinate with Section 31 00 00.01 - Earthwork - Short Form.

- .2 Below Grade Areas: Completely fill below grade areas and voids resulting from structure demolition operations with [satisfactory soil materials] [recycled pulverized concrete] according to backfill requirements in Section [31 00 00.01 - Earthwork - Short Form].
- .3 Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes.
- .4 Provide a smooth transition between adjacent existing grades and new grades.

3.05 REPAIRS

- .1 General: Promptly repair damage to adjacent construction caused by structure demolition operations.
- .2 Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- .3 Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.06 CLEANING

- .1 Develop [Construction Waste Management Plan] [Waste Reduction Workplan] related to Work of this Section and in accordance with Section [01 74 19 - Waste Management and Disposal].
- .2 Waste Management: Separate waste materials for [reuse] [and] [recycling] in accordance with Section [01 74 19 - Waste Management and Disposal].
- .3 Divert excess materials from landfill to site approved [Departmental Representative] [DCC Representative] [Consultant].

SPEC NOTE: Proper stockpiling will help maintain the value of salvaged

materials. The following paragraphs specify stockpiling procedures.

- .4 Designate appropriate security resources / measures to prevent vandalism, damage and theft.

SPEC NOTE: Include the following paragraph if salvaged materials are designated to be reused on site in retro-fit or new development situations.

- .5 Locate stockpiled materials convenient for use in new construction. Eliminate double handling wherever possible.
- .6 Stockpile materials designated for alternate disposal in location which facilitates removal from site and examination by potential end markets, and which does not impede disassembly, processing, or hauling procedures.
 - .1 Label stockpiles, indicating material type and quantity.

SPEC NOTE: List items that have been selected for alternate disposal.

- .7 Separate from general waste stream each of following materials. Stockpile materials in neat and orderly fashion in location and as directed by [Departmental Representative] [DCC Representative] [Consultant] for alternate disposal. Stockpile materials in accordance with applicable fire and safety regulations.
 - .1 [Glass fibre ceiling tiles].
 - .2 [Wood fibre ceiling tiles].
 - .3 Power source poles deemed unfit for reuse by [Departmental Representative] [DCC Representative] [Consultant].
 - .4 Wiring and conduit.
 - .5 Outlets/switches.
 - .6 Floor receptacles.
 - .7 Metal duct work, baffles, HVAC equipment.
 - .8 Demountable partitions.
 - .9 [Drapes].
 - .10 [Tracks and blinds].
 - .11 [Insulation batts].
 - .12 Miscellaneous metals.
 - .13 [Carpet].
 - .14 [_____].
- .8 Supply separate, clearly marked disposal bins for categories of waste material. [Do not remove bins from site until inspected and approved by [Departmental Representative] [DCC Representative] [Consultant].] [Please notify [Departmental Representative] [DCC Representative] [Consultant] before removal of bins from site.]

SPEC NOTE: Specify materials to be reused in new construction.

- .9 Stockpile on site [insulation Batts], [steel studs] and [clips] in good condition for reuse in new construction.

- .10 Remove stockpiled material as directed by [Departmental Representative] [DCC Representative] [Consultant], when it interferes with operations of project construction.
- .11 Remove stockpiles of like materials by alternate disposal option once collection of materials is complete.
- .12 Transport material designated for alternate disposal using approved [haulers] [facilities] [receiving organizations] listed in [Waste Reduction Workplan] and in accordance with applicable regulations.
 - .1 Written authorization from [Departmental Representative] [DCC Representative] [Consultant] is required to deviate from [haulers] [facilities] [receiving organizations] listed in [Waste Reduction Workplan].
- .13 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.
 - .1 Disposal facilities must be those approved of and listed in [Waste Reduction Workplan].
 - .2 Written authorization from [Departmental Representative] [DCC Representative] [Consultant] is required to deviate from disposal facilities listed in [Waste Reduction Workplan].

END OF SECTION

SPEC NOTE: DESCRIPTION: Removal of tanks and related piping to avoid contamination, maintain occupational health and safety during removal and dispose of tanks and their residues in a way that does not compromise soil or ground water.

SPEC NOTE: Tank removal involves three areas of hazard: improper removal of tanks and piping which can result in releases that contaminate the environment (careless excavation); occupational health and safety hazards, including explosions, fires, and inhalation of fumes; and improper disposal of tanks and their residual liquids and sludges and surrounding contaminated soil or ground water. These aspects underline the importance of ensuring that those involved in this activity are properly trained in all aspects and are accountable through licensing procedures.

1 GENERAL

1.01 SUMMARY

SPEC NOTE: Modify the summary to reflect actual environmental assessment and remediation guidelines provided by an environmental consultant. Including a summary at this location assists the bidder during the bedding period to quickly ascertain the amount of work required for the project and guide them to read more detailed specification requirements governing this work.

- .1 This Section includes requirements for removal of underground fuel storage tanks, liquid, and associated work, including soil removal as indicated on Drawings; restoration of excavated area with new materials to match adjacent (existing) surfaces including:
 - .1 Underground fuel tank liquid removal including [testing of tank contents (liquid)], removal and disposal of tank contents, and certification of contents and disposal.
 - .2 Underground fuel tank cleaning and disposal including tank excavation, evacuation of combustible vapours, tank cleaning, disassembling of tank, and certification for proper disposal of tank.
 - .3 [Contamination assessment of site including soil testing, and where results indicate contamination removal and disposal of contaminated soil, and certification for proper disposal of contaminated soil; a change to contract will be considered where contaminated soil is found outside of area of excavation].

SPEC NOTE: Modify the following paragraph to reflect actual environmental assessment, and include notification of leaks and approximate extent of fuel or effluent bloom.

- .2 [Departmental Representative] [DCC Representative] [Owner] has been monitoring [fuel] [effluent] levels on a monthly basis, and indicate that [tank is] [tanks are] secure and that there should be little or no soil contamination in area of tank.

1.02 RELATED REQUIREMENTS

SPEC NOTE: Coordinate with the following Section where contaminated soils are expected or encountered on the project site and add requirements for soil removal and disposal, or other remediation measures required to decontaminate the site.

- .1 Section [_____].
- .2 [Section 02 50 00 - Site Remediation]

1.03 REFERENCE STANDARDS

- .1 American Petroleum Institute (API)
 - .1 API 1604-96, Closure of Underground Petroleum Storage Tanks.
- .2 ASTM International (ASTM)
 - .1 ASTM E1739-95 [(2015)], Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites.
 - .2 ASTM E1912-98 [2004], Standard Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases
 - .3 ASTM E1943-98 [2015] Guide for Remediation of Ground water by Natural Attenuation at Petroleum Release Sites

SPEC NOTE: Edit the following paragraphs for this specific project.

- .3 Canadian Federal and Provincial Legislation and Guideline
 - .1 Canadian Environmental Protection Act (CEPA), 1999
 - .2 Canadian Environmental Assessment Act (CEAA), 1995
 - .3 Environment Canada Technical Assistance Bulletin TAB 8, Tanks
 - .4 Transportation of Dangerous Goods Act (TDGA), 1992
 - .5 Motor Vehicle Safety Act (MVSA), 1995
 - .6 Canadian Council of Ministers of the Environment (CCME)
 - .7 PN1326, Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.
 - .8 Alberta Environment, Risk Management Guidelines for Petroleum Storage Tank Sites, 2001.
 - .9 Fuel Industry Certificates, Ontario Regulation 215/01, as amended..4.8 Certification of Petroleum Equipment Mechanics. Ontario Regulation 216/01.
- .4 National Fire Protection Agency (NFPA)
 - .1 NFPA 30: Flammable and Combustible Liquids Code (the most up-to-date)
 - .2 NFPA 326: Standard for Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair (the most up-to-date)
 - .3 NFPA 329: Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases (the most up-to-date)
- .5 Petroleum Tank Management Association of Alberta (PTMAA)

- .1 Regulations for Underground Storage Tank Closures

1.04 UNIT PRICES

SPEC NOTE: Coordinate requirements for unit prices with Division 00 as applicable to the project.

- .1 Provide unit price for excavation, remediation and disposal of contaminated soils in the event that they are encountered during removal of underground fuel tank soil testing.
- .2 Unit prices will apply where more than 75 m³ of soil is required to be removed from boundary area around the fuel tank; base contract shall account for this initial removal amount.

1.05 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide required information in accordance with Section [01 33 00 - Submittal Procedures].
- .2 Submit a written report describing in detail procedures used to remove liquid from underground storage tank, cleaning and removing of underground storage tank, and disposal of liquid residues; provide verification that materials were disposed of in an environmentally responsible waste disposal facility; provide photographic documentation of work, including lab and field results, and receipts from disposal sites for tank and liquid residue.
- .3 Submit a written contingency plan for actions to be taken in the event of a release or emergency including:
 - .1 Emergency contact numbers;
 - .2 Classification of land use;
 - .3 Plans for covering/containing contaminated soil;
 - .4 Plans for site assessment/remediation work; and,
 - .5 Reducing risk to human health.

1.06 QUALITY ASSURANCE

- .1 Refer to laws, by laws, ordinances, rules, regulations and orders of authority having jurisdictions, and other legally enforceable requirements applicable to Work at that area; or become in force during Work performance.
- .2 Underground fuel tank removal and disposal shall comply with requirements of authorities having jurisdiction.

1.07 PROJECT SITE CONDITIONS

- .1 Obtain necessary permissions and permits from [Municipal Authorities] where closure or obstruction of streets, sidewalks or driveways is required by work of this Section.

2 PRODUCTS

2.01 MATERIALS

- .1 Provide necessary materials, equipment and tarps to prevent further contamination of site, and for safe handling and containment of fuel, fuel storage and removed contaminated soils.

3 EXECUTION

3.01 PREPARATION

- .1 Provide all necessary personal protective equipment, purging and inert gases, and electrical protection equipment, and verify that equipment is working properly before starting work of this Section.

3.02 UNDERGROUND STORAGE TANK REMOVAL

- .1 Liquid Removal:
 - .1 Provide samples of liquids from underground fuel storage tank to a certified hazardous waste testing facility for laboratory analysis and approval for liquid disposal and disposal location.
 - .2 Remove liquid from tank for disposal prior to removing tank from ground.
 - .3 Obtain disposal facility receipts noting proper liquid disposal.
- .2 Storage Tank Cleaning:
 - .1 Remove tank from ground, place it on ground adjacent to removal location, and secure it prior to cleaning.
 - .2 Measure levels of combustible vapours and oxygen, and ventilate tank if required to bring vapour or oxygen levels to safe limits:
 - .1 Ventilate tank using a small gas exhauster until vapour concentration is reduced to 10% or less of lower explosive limit.
 - .2 Oxygen content shall range from 19.5% to 23.5%.
 - .3 Cut access ports for cleaning into tank after vapour and oxygen concentrations are at a safe level.
 - .3 Clean tank by mopping, scraping, sweeping or steam cleaning interior of tank.
 - .4 Collect, contain and place residuals removed from tank in a 200 litre capacity drum for transporting and disposal acceptable to authorities having jurisdiction.
 - .5 Obtain disposal facility receipts noting proper effluent disposal.
- .3 Storage Tank Disposal:
 - .1 Verify that final vapour and oxygen concentrations are within requirements noted above before proceeding to cut and dismantle tank for its disposal.
 - .2 Remove dismantled tank to a disposal facility acceptable to

authorities having jurisdiction.

- .3 Obtain disposal facility receipts noting proper tank disposal.

3.03 REMOVED TANK AREA ASSESSMENT

- .1 Collect [five] soil samples from removed underground storage tank area as follows:
 - .1 One sample from each of sidewalls.
 - .2 One sample from base.
- .2 Place samples in glass sample jars and seal with Teflon coated lids, and place jar on ice.
- .3 Deliver samples with completed chain of custody documentation to laboratory.
- .4 Laboratory shall analyze each sample for Total Petroleum Hydrocarbon (TPH) concentrations.
- .5 Site Restoration: Refer to Section [31 23 33.01 - Excavating, Trenching and Backfilling] for excavation, backfilling and compaction requirements for non contaminated remediation work.

3.04 CONTAMINATED SOIL REMEDIATION

- .1 Perform remediation work in accordance with Section [02 50 00 - Site Remediation]
- .2 Collect additional soil samples beyond boundaries of original fuel tank location. When soil assessments reveal evidence of leakage or spillage of hydrocarbons at levels above those established by authorities having jurisdiction relating to environmental management for underground storage tank closures.
- .3 Boundary of tank shall not to exceed 75 m³ of soil removed; work beyond this boundary will be considered as an extra to Contract and shall be based on unit pricing.
- .4 Continue soil removal and soil contamination assessment testing around tank until contamination levels are within acceptable levels.
- .5 Remove contaminated soil from site and haul it to an approved sanitary landfill for proper disposal.

END OF SECTION

PART 3 – RFQ SPECIFICATIONS
SCHEDULE 3-A-3
REFERENCE DOCUMENTS

DSS Surveys
337606 HBMS (Pre-demo) Laurier Ave North Bay ON ONTC Feb 20 2024 Old Signals Building
ONR - Cochrane Various Buildings - DSS Report
Environmental Assessment
337606.001 - EA Report, Laurier Ave, North Bay, ON ONTC Feb 27 2024
Policies and Procedures
Canadian Rail Operating Rules – May 09, 2022
Contractors working on ONTC Property
ONTC Electrical Safety Policy and Program
ONTC Policy – Contractor Subcontractor

**Reference Documents are a set of documents that may be useful to the Contractor. All information provided in reference documents require site confirmation by the Contractor.*



February 20, 2024

Ontario Northland Transportation Commission
200A Railway Street
Cochrane, Ontario P0L 1C0

Re: Hazardous Building Materials Assessment (Pre-Demolition)

Light Signals Building, Laurier Avenue, North Bay, ON
Pinchin File: 337606

The Ontario Northland Transportation Commission (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of the Light Signals Building located at Laurier Avenue, North Bay, Ontario.

Pinchin performed the assessment on February 6, 2024. The assessor was accompanied by a client representative during the assessment. The assessed area was vacant at the time of the assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for building demolition activities. The proposed work as identified by the Client includes complete demolition of the building.

The results of this assessment are intended for use with a properly developed scope of work or performance specification.

The **assessed area** consisted of all accessible areas of the building, including the roof.

The assessment was performed to establish the type of specified hazardous building materials, locations and approximate quantities incorporated in the structure and its finishes.

For the purpose of the assessment and this report, hazardous building materials are defined as follows:

- Asbestos
- Lead
- Silica
- Mercury
- Polychlorinated Biphenyls (PCBs)
- Mould and Water Damage

Arsenic, acrylonitrile, benzene, coke oven emissions, ethylene oxide, isocyanates and vinyl chloride monomer are not typically found in building materials in a composition/state that is hazardous and were not included in this assessment.



1.0 RECOMMENDATIONS

1.1 General

Prepare scope of work or performance specifications for hazardous material removal required for the planned work. The specifications should include safe work practices, personal protective equipment, respiratory protection, and disposal of waste materials.

If suspected hazardous building materials are discovered during the planned work, which are not identified in this report, do not disturb, and arrange for further testing and evaluation.

Conduct further investigation of the following items, areas, or locations, which were not completed during this assessment:

- Any items listed as exclusions in this report, prior to disturbance.

Provide this report and the detailed plans and specifications to the contractor prior to bidding or commencing work.

Retain a qualified consultant to specify, observe and document the successful removal of hazardous materials.

1.2 Remedial Work

Lead-containing paint in poor condition and mould impacted materials were observed throughout the building. Since it was reported to Pinchin that the building is being demolished, immediate remediation of hazardous materials in poor condition is not required, however, personnel entering the building should take appropriate precautions (i.e. applicable personal protective equipment including respiratory protection) and minimize disturbance of hazardous materials when entering the building.

Refer to the All Data Report in Appendix VI for details on locations and quantity of hazardous materials in poor condition and mould impacted materials.

1.3 Building Demolition Work

The following recommendations are made regarding demolition involving the hazardous materials identified.

1.3.1 Asbestos

Remove all asbestos-containing materials (ACM) prior to demolition work following safe work procedures.

If the identified ACM will not be removed prior to commencement of the work, any potential disturbance of ACM must follow asbestos precautions appropriate for the type of work being performed.

Asbestos-containing materials must be disposed of at a landfill approved to accept asbestos waste.



1.3.2 Lead

For lead-containing or lead-based paints (i.e. greater than the EACC guideline of 0.1% (1,000 mg/kg) for lead-containing paints, and 0.5% (5,000 mg/kg) for lead-based), construction disturbance may result in over-exposure to lead dust or fumes. The need for work procedures, engineering controls and personal protective equipment should be assessed on a site-specific basis to comply with Ministry of Labour, Training and Skills Development regulations and guidelines.

For paints identified as having low levels of lead (i.e. equal to or above 0.009% (90 mg/kg) but less than or equal to the EACC guideline of 0.1% (1,000 mg/kg) for lead-containing paints) special precautions are not recommended unless aggressive disturbance (grinding, blasting, torching) is planned. Exposure from construction disturbance of paints containing lead less than 0.009% (90 mg/kg) is assumed to be insignificant.

Items painted with paints containing elevated levels of lead may be a hazardous waste. Test lead-painted materials for leachable lead and other metals prior to disposal. Metallic components coated with lead paint do not require leachate testing and can be disposed of as non-hazardous construction and demolition (C&D) waste.

Dispose of painted materials exceeding the criteria for leachable lead as hazardous waste.

Lead-containing items should be recycled when taken out of service.

1.3.3 Silica

Construction disturbance of silica-containing products may result in excessive exposures to airborne silica, especially if performed indoors and dry. Cutting, grinding, drilling or demolition of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions that comply with applicable regulations and guidelines.

1.3.4 Mercury

Do not break lamps or separate liquid mercury from components. Recycle and reclaim mercury from fluorescent lamps and thermostats when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with applicable regulations.

1.3.5 PCBs

Prior to demolition, remove light fixtures and examine light ballasts for PCB content. If ballasts are not clearly labelled as "non-PCB" or are suspected to contain PCBs, package and ship ballasts for destruction at a federally permitted facility.

1.3.6 Mould and Water Damage

Use appropriate precautions and protect workers during removal using methods that comply with provincial guidelines.



Hazardous Building Materials Assessment (Pre-Demolition)

Light Signals Building, Laurier Avenue, North Bay, ON
Ontario Northland Transportation Commission

February 20, 2024
Pinchin File: 337606.000

2.0 BACKGROUND INFORMATION

2.1 Assessed Area Description Summary

Description Item	Details
Building Use	Transportation (Light Signals Building)
Floors Above Grade	One
Total Area (square feet)	1,500 square feet
Year of Construction	1950
Structure	Concrete, metal and wood
Exterior Cladding	Vertical medal siding
HVAC	Natural gas furnace
Roof	Sloped metal roof
Flooring	Concrete and vinyl floor tiles
Wall and Ceiling Finishes	Metal, wood and cement product (transite) panels

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Site Specific Notes
S0001 ABC	Wall Cement Product (transite)	Chrysotile	Yes	3,200 SF	
S0002 ABC	Floor Mastic, Black	None Detected	No	90 LF	
S0003 ABC	Window Caulking Grey glazing	None Detected	No	229 LF	
S0004 ABC	Floor Vinyl Floor Tile 12" x 12" white	Chrysotile	Yes	200 SF	
V0000	Floor Mastic Under 12"x12" white vinyl floor tile	None Detected	No	200 SF	Samples S0004A-C; Layer 2
S0005 ABC	Floor Vinyl Floor Tile 12" x 12" white fleck	Chrysotile	Yes	350 SF	
V0000	Floor Mastic Under 12"x12" white fleck vinyl floor tile	None Detected	No	200 SF	Samples S0005A-C; Layer 2
S0006 ABC	Floor Vinyl Floor Tile and Mastic 9" x 9" purple	Tile: Chrysotile Mastic: Chrysotile	Yes	30 SF	



Hazardous Building Materials Assessment (Pre-Demolition)

Light Signals Building, Laurier Avenue, North Bay, ON
Ontario Northland Transportation Commission

February 20, 2024
Pinchin File: 337606.000

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Site Specific Notes
S0007 ABC	Wall Tar Paper (concealed behind Transite board)	None Detected	No	3,150 SF	
S0008 ABC	Window Caulking Brown glazing	None Detected	No	15 LF	
V0000	Attic Fibreglass Insulation	None	No	1,500 SF	1

2.2 Existing Reports

2.2.1 Review of Previous Reports

No existing reports were provided for reference.

3.0 FINDINGS

Any quantities listed in this report or data tables are estimated based on visual approximations only and are subject to variation.

3.1 Asbestos

The following table summarizes the materials evaluated for asbestos in the assessed area. For details on approximate quantities, condition, friability, accessibility, and locations of hazardous building materials; refer to the Hazardous Material Summary / Sample Log and All Data Report in Appendices V and VI.

Site Specific Notes:

1. Loose fill vermiculite debris was not observed in the attic space. The attic is insulated with non-asbestos batt fibreglass insulation.

General Notes:

1. Materials identified as Sample Number V0000 were determined to be non-asbestos based on the composition or analytical results.

3.1.1 Excluded Asbestos Materials

The following is a list of materials which may contain asbestos and were excluded from the assessment. These materials are presumed to contain asbestos until otherwise proven to be non-asbestos by sampling and analysis:

- Electrical components
- Sealants on pipe threads



- Inaccessible/concealed materials

3.2 Lead

Refer to the Hazardous Material Summary / Sample Log and All Data Report in Appendices V and VI for details on locations, condition and approximate quantities on paints sampled and their locations.

The following table summarizes the analytical results of paints sampled.

Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present	Site Specific Notes
L0001	Floor Concrete (poured) Grey	0.64%	Yes	830 SF	
L0002	Ceiling Metal White	0.073%	Yes	1,210 SF	
L0003	Wall Metal Blue	0.90%	Yes	120 SF	
L0004	Wall Metal Orange	1.4%	Yes	80 SF	
L0005	Wall Cement Product White	0.29%	Yes	3,200 SF	
L0006	Exterior Wall Metal White	0.40%	Yes	3,300 SF	
L0007	Exterior Door Wood Blue	0.013%	Yes	50 SF	

General Notes:

1. Results above 0.1% (1,000 mg/kg) are considered lead-containing, and over 0.5% (5,000 mg/kg) are considered lead-based.
2. Results less than or equal to 0.1% (1,000 mg/kg), but equal to or greater than 0.009% (90 mg/kg), are considered low-level lead paints or surface coatings in accordance with the EACC guideline.

3.2.1 Lead Products and Applications

Refer to the Hazardous Material Summary / Sample Log and All Data Report in Appendices V and VI for details on lead-products including their locations and quantities.

Sample Number	Material Description	Confirmed Hazard	Total Quantity Present	Site Specific Notes
V9000	Bell And Spigot Fittings	Yes	1 EA	



General Notes:

1. Items identified as Sample Number V9000 were observed to be present and were determined to contain lead based on visual observation (e.g. bell and spigot joints).

3.2.2 Excluded Lead Materials

Lead may be present in a number of materials which were not assessed and/or sampled. The following materials, where found, should be considered to contain lead.

- Electrical components, including wiring connectors, grounding conductors, and solder.
- Solder on pipe connections.

3.3 Silica

Crystalline silica is a presumed component of the following materials:

- Poured and pre-cast concrete.

3.4 Mercury

Refer to the Hazardous Material Summary / Sample Log and All Data Report in Appendices V and VI for details on mercury-containing products including their locations and quantities.

Sample Number	Material Description	Confirmed Hazard	Total Quantity Present	Site Specific Notes
V9000	Light Fixture	Yes	20 EA	
V9000	Thermostat	Yes	1 EA	

General Notes:

1. Items identified as Sample Number V9000 were observed to be present and were determined to contain mercury based on visual observation (e.g. labelled lamps and ampules in thermostats).

3.5 Polychlorinated Biphenyls

Refer to the Hazardous Material Summary / Sample Log and All Data Report in Appendices V and VI for details on PCB-products including their locations and quantities.

Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present	Notes
P0001	Caulking Glazing composite	<1mg/kg	No	229 LF	



Hazardous Building Materials Assessment (Pre-Demolition)

Light Signals Building, Laurier Avenue, North Bay, ON
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Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present	Notes
V9500	Light Ballasts	N/A	Yes	13 EA	

General Notes:

1. Caulking in the table above is considered a non-PCB solid based on the threshold (50 mg/kg or ppm).
2. Materials identified as Sample Number V9500 were either observed to be present or based on the construction of the building/equipment are likely present in concealed locations. These materials have not been sampled and are presumed to contain PCBs based on historical known use. Sampling of these materials may be completed prior to disturbance.

3.6 Mould and Water Damage

The following mould growth and water damage was identified:

Sample Number	Material Description	HMIS Location	Confirmed Hazard	Total Quantity Present	Notes
V9000	Contents	4	Yes	5	Mould is present on paper files

General Notes

1. Items identified as Sample V9000 were observed to be present and are suspected to be impacted by suspect mould growth based on visual observation.

4.0 METHODOLOGY

Pinchin conducted a room-by-room assessment to identify the hazardous building materials as defined in the scope.

The assessment included demolition of wall and ceiling finishes (metal and cement product) to view concealed conditions at representative areas as permitted by the current building use. Destructive testing of flooring was conducted where possible (multiple layers of flooring). Demolition of exterior building finishes, masonry walls (chases, shafts etc.), and structural surrounds was conducted as permitted by the current building use.

Masonry block walls were not observed on site, therefore limited demolition of masonry block walls (core holes) was not conducted to investigate for loose fill vermiculite insulation.



Suspect roofing materials were not observed during the assessment.

For further details on the methodology including test methods and evaluation criteria, refer to Appendix III.

5.0 REFERENCES

The following legislation and documents were referenced in completing the assessment and this report:

1. Asbestos on Construction Projects and in Buildings and Repair Operations, Ontario Regulation 278/05.
2. Designated Substances, Ontario Regulation 490/09.
3. Lead on Construction Projects, Ministry of Labour Guidance Document.
4. The Environmental Abatement Council of Canada (EACC) Lead Guideline for Construction, Renovation, Maintenance or Repair.
5. Ministry of the Environment Regulation, R.R.O. 1990 Reg. 347 as amended.
6. Ministry of the Environment Regulation, R.R.O. 1990 Reg. 362 as amended.
7. Silica on Construction Projects, Ministry of Labour Guidance Document.
8. Alert – Mould in Workplace Buildings, Ontario Ministry of Labour.
9. PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act.
10. Surface Coating Materials Regulations, SOR/2016-193, Canada Consumer Product Safety Act.
11. Consolidated Transportation of Dangerous Goods Regulations, including Amendment SOR/2019-101, Transportation of Dangerous Goods Act.
12. Mould Guidelines for the Canadian Construction Industry, Standard Construction Document CCA 82 – 2004 (Revised 2018), Canadian Construction Association.

6.0 LIMITATIONS

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.



7.0 CLOSURE

The data presented in the appendices is prepared by Pinchin's Hazardous Materials Inventory System (HMIS). The information can be made available for your real-time access through our secure web-based platform. Please contact your Pinchin representative to discuss HMIS solutions for management of your asbestos (and other hazardous materials) inventory.

Contact the undersigned should you have any questions.

Sincerely,

Pinchin Ltd.

Prepared by:

Reviewed by:

Tamara Beaton, B.Sc.

Project Manager

705.521.0560

tbeaton@pinchin.com

Halie MacKillican

Team Leader, Hazardous Materials

613.541.1013

hmackillican@pinchin.com

Encl:	APPENDIX I	Drawings
	APPENDIX II-A	Asbestos Analytical Certificates
	APPENDIX II-B	Lead Analytical Certificates
	APPENDIX II-C	PCB Analytical Certificates
	APPENDIX III	Methodology
	APPENDIX IV	Location Summary Report
	APPENDIX V	Hazardous Materials Summary Report / Sample Log
	APPENDIX VI	All Data Report
	APPENDIX VII	Photographs

APPENDIX I
Drawings



ASBESTOS-CONTAINING MATERIALS:

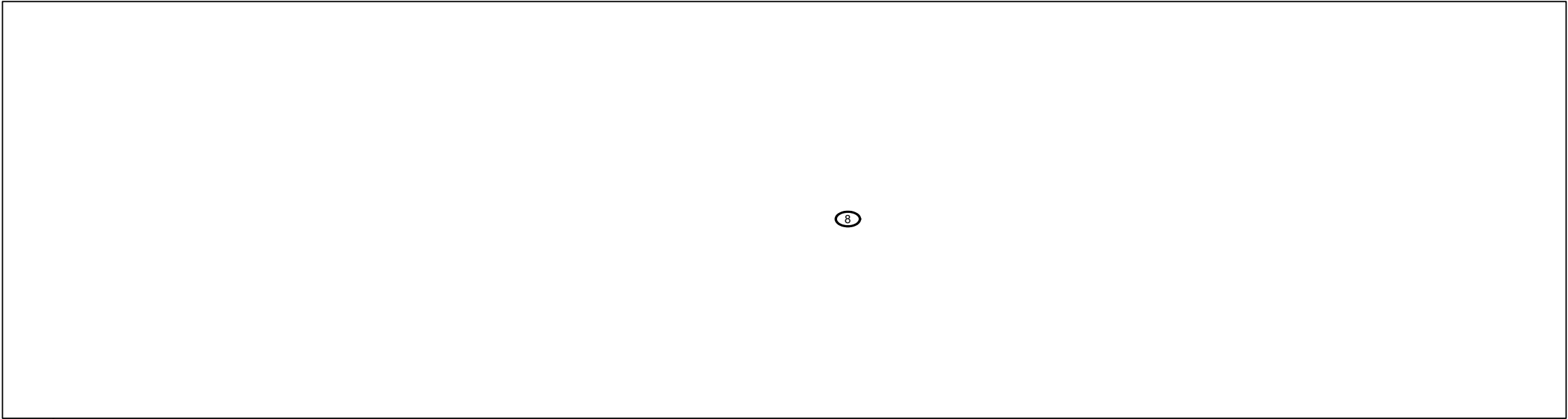
NOT ALL KNOWN OR SUSPECTED
HAZARDOUS BUILDING MATERIALS MAY BE
DEPICTED ON THE DRAWING. REFER TO THE
HAZARDOUS BUILDING MATERIALS
ASSESSMENT REPORT FOR A COMPLETE
LIST OF KNOWN AND SUSPECTED
HAZARDOUS BUILDING MATERIALS.








The logo for PINCHIN, featuring the word "PINCHIN" in a bold, sans-serif font, with a red swoosh underline that starts under the 'P' and ends under the 'N'.

CLIENT NAME: ONTARIO NORTHLAND
TRANSPORTATION
COMMISSION

FIGURE NAME:
GROUND FLOOR


PROJECT NUMBER: 337606	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: TB
DATE: FEBRUARY 2024	FIGURE NUMBER: 1 OF 2



- LEGEND
-  PINCHIN LOCATION NUMBER
 -  ASBESTOS BULK SAMPLE
 -  LEAD BULK SAMPLE
 -  PCB BULK SAMPLE
- ASBESTOS-CONTAINING MATERIALS:
-  VINYL FLOOR TILES
 -  VINYL FLOOR TILES & MASTIC
 -  CEMENT PRODUCT (TRANSITE)

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



PROJECT NAME:

HAZARDOUS BUILDING MATERIALS ASSESSMENT

CLIENT NAME:

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

PROJECT LOCATION:

LAURIER AVENUE,
NORTH BAY, ONTARIO

FIGURE NAME:

ATTIC

PROJECT NUMBER: 337606	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: TB
DATE: FEBRUARY 2024	FIGURE NUMBER: 2 OF 2

APPENDIX II-A
Asbestos Analytical Certificates



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Joseph Carrey

Pinchin Ltd
2360 Meadowpine Blvd
Unit # 2
Mississauga, ON
CANADA L5N 6S2

Report Date: 2024/02/13
Report #: R8026440
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437822

Received: 2024/02/07, 09:37

Sample Matrix: Solid
Samples Received: 24

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
Asbestos by PLM - 0.5 RDL (1)	12	N/A	2024/02/12 COR3SOP-00002	EPA 600R-93/116
Asbestos by PLM - 0.5 RDL (1)	12	N/A	2024/02/13 COR3SOP-00002	EPA 600R-93/116

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas 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 Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Bureau Veritas' Asbestos Laboratory is accredited by NVLAP for bulk asbestos analysis by polarized light microscopy, NVLAP Code 600136-0.

This report may not be reproduced, except in full, without the written approval of Bureau Veritas. This report may not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Bureau Veritas' scope of accreditation includes EPA -- 40 CFR Appendix E to Subpart E of Part 763, "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" and EPA-600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials".

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.



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Joseph Carrey

Pinchin Ltd
2360 Meadowpine Blvd
Unit # 2
Mississauga, ON
CANADA L5N 6S2

Report Date: 2024/02/13
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437822

Received: 2024/02/07, 09:37

(1) P.O.B. - Percent of Bulk

When Asbestos data is reported with other data, this report contains data that are not covered by the NVLAP accreditation.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Nilushi Mahathantila, Project Manager
Email: Nilushi.Mahathantila@bureauveritas.com
Phone# (905) 817-5700

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This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0001A WALL,CEMENT PRODUCT,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY055		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos		Particulate
Layer 1	100	Homogeneous grey Transite	Chrysotile	15%	Non-Fibrous

S0001B WALL,CEMENT PRODUCT,LOC:3,OFFICE					
Bureau Veritas ID:		YHY056	Date Analyzed:		2024/02/12
	<u>P.O.B</u>	<u>Sample Morphology</u>	<u>Asbestos</u>	<u>Other Fibres</u>	<u>Particulate</u>
Layer 1			N/A		
	Comment: Not Analyzed - Positive Stop				

S0001C WALL,CEMENT PRODUCT,LOC:4,STORAGE					
Bureau Veritas ID:		YHY057	Date Analyzed:		2024/02/12
	<u>P.O.B</u>	<u>Sample Morphology</u>	<u>Asbestos</u>	<u>Other Fibres</u>	<u>Particulate</u>
Layer 1			N/A		
	Comment: Not Analyzed - Positive Stop				

S0002A WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY058		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos		Particulate
Layer 1	100	Homogeneous black tar	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0002B WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY059		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous black tar	Not Detected		Non-Fibrous

S0002C WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY060		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous black tar	Not Detected		Non-Fibrous

S0003A WALL,WINDOW,CAULKING,GREY GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY061		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous grey caulking	Not Detected		Non-Fibrous

S0003B WALL,WINDOW,CAULKING,GREY GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY062		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous grey caulking	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0003C WALL,WINDOW,CAULKING,GREY GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY063		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous grey caulking	Not Detected		Non-Fibrous

S0004A FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE,LOC:4,STORAGE					
Bureau Veritas ID: YHY064		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	Chrysotile 2%		Non-Fibrous
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

S0004B FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE,LOC:4,STORAGE					
Bureau Veritas ID: YHY065		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	N/A		
	Comment: Not Analyzed - Positive Stop				
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0004C FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE,LOC:4,STORAGE					
Bureau Veritas ID: YHY066		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	N/A		
Comment: Not Analyzed - Positive Stop					
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

S0005A FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE FLECK,LOC:3,OFFICE					
Bureau Veritas ID: YHY067		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	Chrysotile 1%		Non-Fibrous
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0005B FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE FLECK,LOC:3,OFFICE					
Bureau Veritas ID: YHY068		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	N/A		
	Comment: Not Analyzed - Positive Stop				
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

S0005C FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE FLECK,LOC:3,OFFICE					
Bureau Veritas ID: YHY069		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	95	Homogeneous beige vinyl floor tile	N/A		
	Comment: Not Analyzed - Positive Stop				
Layer 2	5	Homogeneous black mastic	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0006A FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM					
Bureau Veritas ID: YHY070		Date Analyzed: 2024/02/12			
	P.O.B	Sample Morphology	Asbestos		Particulate
Layer 1	95	Homogeneous grey vinyl floor tile	Chrysotile	1%	Non-Fibrous
Layer 2	5	Homogeneous black mastic	Chrysotile	2%	Non-Fibrous

S0006B FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM					
Bureau Veritas ID: YHY071		Date Analyzed: 2024/02/13			
	<u>P.O.B</u>	<u>Sample Morphology</u>	<u>Asbestos</u>	<u>Other Fibres</u>	<u>Particulate</u>
Layer 1			N/A		
	Comment: Not Analyzed - Positive Stop				

S0006C FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM					
Bureau Veritas ID: YHY072		Date Analyzed: 2024/02/13			
	<u>P.O.B</u>	<u>Sample Morphology</u>	<u>Asbestos</u>	<u>Other Fibres</u>	<u>Particulate</u>
Layer 1			N/A		
	Comment: Not Analyzed - Positive Stop				

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0007A WALL,TAR PAPER,LOC:1,MAIN OFFICE						
Bureau Veritas ID: YHY073		Date Analyzed: 2024/02/13				
	P.O.B	Sample Morphology	Asbestos	Other Fibres		Particulate
Layer 1	100	Homogeneous black tar paper	Not Detected	Cellulose	30%	Non-Fibrous
				Glass Fibres	15%	

S0007B WALL,TAR PAPER,LOC:1,MAIN OFFICE						
Bureau Veritas ID: YHY074		Date Analyzed: 2024/02/13				
	P.O.B	Sample Morphology	Asbestos	Other Fibres		Particulate
Layer 1	100	Homogeneous black tar paper	Not Detected	Cellulose	30%	Non-Fibrous
				Glass Fibres	15%	

S0007C WALL,TAR PAPER,LOC:1,MAIN OFFICE						
Bureau Veritas ID: YHY075		Date Analyzed: 2024/02/13				
	P.O.B	Sample Morphology	Asbestos	Other Fibres		Particulate
Layer 1	100	Homogeneous black tar paper	Not Detected	Cellulose	30%	Non-Fibrous
				Glass Fibres	15%	

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, “<0.50%”. “Not Detected” indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

Asbestos Analytical Results

EPA/600R-93/116 by Polarized Light Microscopy

S0008A WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY076		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous brown glazing	Not Detected		Non-Fibrous

S0008B WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY077		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous brown glazing	Not Detected		Non-Fibrous

S0008C WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE					
Bureau Veritas ID: YHY078		Date Analyzed: 2024/02/13			
	P.O.B	Sample Morphology	Asbestos	Other Fibres	Particulate
Layer 1	100	Homogeneous brown glazing	Not Detected		Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, “<0.50%”. “Not Detected” indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd



TEST SUMMARY

Bureau Veritas ID: YHY055
Sample ID: S0001A WALL,CEMENT PRODUCT,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY056
Sample ID: S0001B WALL,CEMENT PRODUCT,LOC:3,OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY057
Sample ID: S0001C WALL,CEMENT PRODUCT,LOC:4,STORAGE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY058
Sample ID: S0002A WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY059
Sample ID: S0002B WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY060
Sample ID: S0002C WALL,MASTIC, BLACK,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY061
Sample ID: S0003A WALL,WINDOW,CAULKING,GREY GLAZING,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad



BUREAU
VERITAS

Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY062
Sample ID: S0003B WALL, WINDOW, CAULKING, GREY GLAZING, LOC:1, MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY063
Sample ID: S0003C WALL, WINDOW, CAULKING, GREY GLAZING, LOC:1, MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY063 Dup
Sample ID: S0003C WALL, WINDOW, CAULKING, GREY GLAZING, LOC:1, MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY064
Sample ID: S0004A FLOOR, VINYL FLOOR TILE AND MASTIC, 12" X 12" WHITE, LOC:4, STORAGE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY065
Sample ID: S0004B FLOOR, VINYL FLOOR TILE AND MASTIC, 12" X 12" WHITE, LOC:4, STORAGE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY066
Sample ID: S0004C FLOOR, VINYL FLOOR TILE AND MASTIC, 12" X 12" WHITE, LOC:4, STORAGE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY067
Sample ID: S0005A FLOOR, VINYL FLOOR TILE AND MASTIC, 12" X 12" WHITE FLECK, LOC:3, OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad



BUREAU
VERITAS

Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY068
Sample ID: S0005B FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE FLECK,LOC:3,OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY069
Sample ID: S0005C FLOOR,VINYL FLOOR TILE AND MASTIC,12" X 12" WHITE FLECK,LOC:3,OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY070
Sample ID: S0006A FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY070 Dup
Sample ID: S0006A FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY071
Sample ID: S0006B FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY072
Sample ID: S0006C FLOOR,VINYL FLOOR TILE AND MASTIC,9" X 9" PURPLE,LOC:5,WASHROOM
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY073
Sample ID: S0007A WALL,TAR PAPER,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad



BUREAU
VERITAS

Bureau Veritas Job #: C437822
Report Date: 2024/02/13

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY074
Sample ID: S0007B WALL,TAR PAPER,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY075
Sample ID: S0007C WALL,TAR PAPER,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY076
Sample ID: S0008A WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY077
Sample ID: S0008B WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad

Bureau Veritas ID: YHY078
Sample ID: S0008C WALL,WINDOW,CAULKING,BROWN GLAZING,LOC:1,MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Asbestos by PLM - 0.5 RDL	MIC	9214880	N/A		Haseeb Ahmad



**BUREAU
VERITAS**

Bureau Veritas Job #: C437822

Report Date: 2024/02/13

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

GENERAL COMMENTS

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C437822

Report Date: 2024/02/13

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Dina Yousif, Analyst 2

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Pinchin Ltd. - Asbestos Laboratory
Internal Asbestos Bulk Sample Chain of Custody

Client Name:	Pinchin			Project Address:	Ontario		
Portfolio/Building No:				Pinchin File:	337606		
Submitted by:	Tamara Beaton			Email:	tbeaton@pinchin.com		
CC Results to:	Joe Carrey			CC Email:	jcarrey@pinchin.com		
Date Submitted:	February	06	2024	Required by:	Month	Day	2020
# of Samples:	24			Priority:	5 Day Turnaround		
Year of Building Construction (Mandatory, Years ONLY):	1950						
Do NOT Stop on Positive (Sample Numbers):							
Pinchin Group Company (Mandatory Field):	Pinchin						
HMIS2 Building Reference #:	129945/20241638136001						
To be Completed by Lab Personnel Only:							
Lab Reference #:				Time:	24 hour clock		
Received by:				Date:	Month	Day	Year
Name(s) of Analyst(s):							
Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)				
S	0001	A	Wall, Cement Product, Loc: 1, Main Office				
S	0001	B	Wall, Cement Product, Loc: 3, Office				
S	0001	C	Wall, Cement Product, Loc: 4, Storage				
S	0002	A	Wall, Mastic, Black, Loc: 1, Main Office				
S	0002	B	Wall, Mastic, Black, Loc: 1, Main Office				
S	0002	C	Wall, Mastic, Black, Loc: 1, Main Office				
S	0003	A	Wall, Window, Caulking, Grey Glazing, Loc: 1, Main Office				

Man C 1152152
07/10/2024 0937

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0003	B	Wall, Window, Caulking, Grey Glazing, Loc: 1, Main Office
S	0003	C	Wall, Window, Caulking, Grey Glazing, Loc: 1, Main Office
S	0004	A	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White, Loc: 4, Storage
S	0004	B	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White, Loc: 4, Storage
S	0004	C	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White, Loc: 4, Storage
S	0005	A	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White Fleck, Loc: 3, Office
S	0005	B	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White Fleck, Loc: 3, Office
S	0005	C	Floor, Vinyl Floor Tile And Mastic, 12" X 12" White Fleck, Loc: 3, Office
S	0006	A	Floor, Vinyl Floor Tile And Mastic, 9" X 9" Purple, Loc: 5, Washroom
S	0006	B	Floor, Vinyl Floor Tile And Mastic, 9" X 9" Purple, Loc: 5, Washroom
S	0006	C	Floor, Vinyl Floor Tile And Mastic, 9" X 9" Purple, Loc: 5, Washroom
S	0007	A	Wall, Tar Paper, Loc: 1, Main Office
S	0007	B	Wall, Tar Paper, Loc: 1, Main Office
S	0007	C	Wall, Tar Paper, Loc: 1, Main Office
S	0008	A	Wall, Window, Caulking, Brown Glazing, Loc: 1, Main Office

Handwritten signature and date:
 04/10/17 0933

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0008	B	Wall, Window, Caulking, Brown Glazing, Loc: 1, Main Office
S	0008	C	Wall, Window, Caulking, Brown Glazing, Loc: 1, Main Office

[Handwritten signature]
 04/02/09 0937

Page 3 of 3

APPENDIX II-B
Lead Analytical Certificates



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Tamara Beaton

Pinchin Ltd
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4

Report Date: 2024/02/12
Report #: R8024670
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437929

Received: 2024/02/07, 09:37

Sample Matrix: Paint
Samples Received: 7

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Metals in Paint	1	2024/02/08	2024/02/08	CAM SOP-00408	EPA 6010D m
Metals in Paint	2	2024/02/09	2024/02/10	CAM SOP-00408	EPA 6010D m
Metals in Paint	4	2024/02/09	2024/02/12	CAM SOP-00408	EPA 6010D m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas 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 Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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.



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Tamara Beaton

Pinchin Ltd
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4

Report Date: 2024/02/12
Report #: R8024670
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437929

Received: 2024/02/07, 09:37

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Nilushi Mahathantila, Project Manager

Email: Nilushi.Mahathantila@bureauveritas.com

Phone# (905) 817-5700

=====

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BUREAU
VERITAS

Bureau Veritas Job #: C437929

Report Date: 2024/02/12

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

ELEMENTS BY ATOMIC SPECTROSCOPY (PAINT)

Bureau Veritas ID		YHY581	YHY581			
Sampling Date		2024/02/06 12:00	2024/02/06 12:00			
COC Number		n/a	n/a			
	UNITS	L0001,GREY,LOC:1,MA IN OFFICE	L0001,GREY,LOC:1,MA IN OFFICE Lab-Dup	RDL	MDL	QC Batch

Metals						
Lead (Pb)	%	0.64	0.88	0.0010	0.00030	9211473
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Lab-Dup = Laboratory Initiated Duplicate						

Bureau Veritas ID		YHY582				YHY583			
Sampling Date		2024/02/06 12:00				2024/02/06 12:00			
COC Number		n/a				n/a			
	UNITS	L0002,WHITE,LOC:1,M AIN OFFICE	RDL	MDL	QC Batch	L0003,BLUE,LOC:1,MA IN OFFICE	RDL	MDL	QC Batch

Metals									
Lead (Pb)	%	0.073	0.00024	0.000072	9211473	0.90	0.0020	0.00060	9208542
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

Bureau Veritas ID		YHY583		YHY584			
Sampling Date		2024/02/06 12:00		2024/02/06 12:00			
COC Number		n/a		n/a			
	UNITS	L0003,BLUE,LOC:1,MA IN OFFICE Lab-Dup	QC Batch	L0004,ORANGE,LOC:4, STORAGE	RDL	MDL	QC Batch

Metals							
Lead (Pb)	%	1.0	9208542	1.3	0.0020	0.00060	9211473
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Lab-Dup = Laboratory Initiated Duplicate							



BUREAU
VERITAS

Bureau Veritas Job #: C437929

Report Date: 2024/02/12

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

ELEMENTS BY ATOMIC SPECTROSCOPY (PAINT)

Bureau Veritas ID		YHY585			YHY586			
Sampling Date		2024/02/06 12:00			2024/02/06 12:00			
COC Number		n/a			n/a			
	UNITS	L0005,WHITE,LOC:1,M AIN OFFICE	RDL	MDL	L0006,WHITE,LOC:7,E XTERIOR	RDL	MDL	QC Batch
Metals								
Lead (Pb)	%	0.29	0.00083	0.00025	0.40	0.0010	0.00030	9211473
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Bureau Veritas ID		YHY587			
Sampling Date		2024/02/06 12:00			
COC Number		n/a			
	UNITS	L0007,BLUE,LOC:7,EXT ERIOR	RDL	MDL	QC Batch
Metals					
Lead (Pb)	%	0.013	0.00010	0.000030	9211473
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C437929

Report Date: 2024/02/12

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY581
Sample ID: L0001,GREY,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/12	Indira HarryPaul

Bureau Veritas ID: YHY581 Dup
Sample ID: L0001,GREY,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/12	Indira HarryPaul

Bureau Veritas ID: YHY582
Sample ID: L0002,WHITE,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/10	Indira HarryPaul

Bureau Veritas ID: YHY583
Sample ID: L0003,BLUE,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9208542	2024/02/08	2024/02/08	Indira HarryPaul

Bureau Veritas ID: YHY583 Dup
Sample ID: L0003,BLUE,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9208542	2024/02/08	2024/02/08	Indira HarryPaul

Bureau Veritas ID: YHY584
Sample ID: L0004,ORANGE,LOC:4,STORAGE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/12	Indira HarryPaul

Bureau Veritas ID: YHY585
Sample ID: L0005,WHITE,LOC:1,MAIN OFFICE
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/12	Indira HarryPaul



Bureau Veritas Job #: C437929
Report Date: 2024/02/12

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY586
Sample ID: L0006,WHITE,LOC:7,EXTERIOR
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/12	Indira HarryPaul

Bureau Veritas ID: YHY587
Sample ID: L0007,BLUE,LOC:7,EXTERIOR
Matrix: Paint

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Paint	ICP	9211473	2024/02/09	2024/02/10	Indira HarryPaul



GENERAL COMMENTS

Sample YHY582 [L0002,WHITE,LOC:1,MAIN OFFICE] : Metals Analysis: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Sample YHY584 [L0004,ORANGE,LOC:4,STORAGE] : Metals Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Sample YHY585 [L0005,WHITE,LOC:1,MAIN OFFICE] : Metals Analysis: Due to limited amount of sample available for analysis, a smaller than usual portion of the sample was used. Detection limits were adjusted accordingly.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C437929

Report Date: 2024/02/12

QUALITY ASSURANCE REPORT

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

QC Batch	Parameter	Date	Matrix Spike		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9208542	Lead (Pb)	2024/02/08	NC	75 - 125	<0.00010	%	12	35	101	75 - 125
9211473	Lead (Pb)	2024/02/12	NC	75 - 125	<0.00010	%	32	35	104	75 - 125

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.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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)



FUNDAMENTAL LABORATORY ACCEPTANCE GUIDELINE

Invoice To:

Pinchin Ltd
ATTN: Accounts Payable
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4
Client Contact:
Tamara Beaton

Bureau Veritas Job #: C437929
Date Received: 2024/02/07
Your C.O.C. #: n/a
Your Project #: 337606
Bureau Veritas Project Manager: Nilushi Mahathantila
Quote #: B90832

No discrepancies noted.

Report Comments

Received Date:	<u>2024/02/07</u>	Time:	<u>09:37</u>	By:	_____
Inspected Date:	_____	Time:	_____	By:	_____
FLAG Created Date:	_____	Time:	_____	By:	_____



BUREAU
VERITAS

Bureau Veritas Job #: C437929

Report Date: 2024/02/12

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

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6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/6

CHAIN OF CUSTODY RECORD

Page ____ of ____

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name: Pinchin Ltd.		Company Name: _____		Quotation #: _____		<input checked="" type="checkbox"/> Regular TAT (5-7 days) Most analyses	
Contact Name: Tamara Beaton		Contact Name: _____		P.O. #/ AFE#: _____		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address: _____		Address: _____		Project #: 337606		Rush TAT (Surcharges will be applied)	
Phone: _____ Fax: _____		Phone: _____ Fax: _____		Site Location: _____		<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3-4 Days	
Email: tbeaton@pinchin.com		Email: _____		Site #: _____		Date Required: _____	
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY				Site Location Province: _____ ON		Rush Confirmation #: _____	
Sampled By: Tamara Beaton							
Regulation 153		Other Regulations		Analysis Requested		LABORATORY USE ONLY	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/ Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/ Other <input type="checkbox"/> Table _____ FOR RSC (PLEASE CIRCLE) Y / N		<input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> PWQO <input type="checkbox"/> Region _____ <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> REG 558 (MIN. 3 DAY TAT REQUIRED) <input type="checkbox"/> REG 406 Table _____		# OF CONTAINERS SUBMITTED FIELD FILTERED (CIRCLE) Metals / Hg / CrVI BTEX / PHC F1 PHCS F2 - F4 VOCs REG 153 METALS & INORGANICS REG 153 ICPMS METALS REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B) Lead (Pb) in Paints PCBs		CUSTODY SEAL Y / N Present Intact COOLER TEMPERATURES COOLING MEDIA PRESENT: Y / <input checked="" type="checkbox"/> N COMMENTS	
Include Criteria on Certificate of Analysis: Y / N		SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS					
SAMPLE IDENTIFICATION		DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX			
L0001, Grey, Loc:1, Main Office		06-Feb-24	12:00	BULK			
L0002, White, Loc:1, Main Office		06-Feb-24	12:00	BULK			
L0003, Blue, Loc:1, Main Office		06-Feb-24	12:00	BULK			
L0004, Orange, Loc:4, Storage		06-Feb-24	12:00	BULK			
L0005, White, Loc:1, Main Office		06-Feb-24	12:00	BULK			
L0006, White, Loc:7, Exterior		06-Feb-24	12:00	BULK			
L0007, Blue, Loc:7, Exterior		06-Feb-24	12:00	BULK			
RELINQUISHED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV JOB #
Tamara Beaton		06-Feb-24	15:00	<i>[Signature]</i>		0937	

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms available at <https://www.bvna.com/coc-terms-and-conditions>

APPENDIX II-C
PCB Analytical Certificates



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Tamara Beaton

Pinchin Ltd
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4

Report Date: 2024/02/15
Report #: R8029347
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437917

Received: 2024/02/07, 09:37

Sample Matrix: Solid
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Polychlorinated Biphenyl in Solids (1)	1	2024/02/12	2024/02/14	CAM SOP-00309	EPA 8082A m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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.

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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 Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) Analysis was conducted according to Bureau Veritas method CAM SOP-00309 and modified where applicable based on the sample matrix. This test is not Standards Council of Canada accredited for this matrix.



Your Project #: 337606
Your C.O.C. #: n/a

Attention: Tamara Beaton

Pinchin Ltd
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4

Report Date: 2024/02/15
Report #: R8029347
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C437917

Received: 2024/02/07, 09:37

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Nilushi Mahathantila, Project Manager

Email: Nilushi.Mahathantila@bureauveritas.com

Phone# (905) 817-5700

=====

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BUREAU
VERITAS

Bureau Veritas Job #: C437917

Report Date: 2024/02/15

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOLID)

Bureau Veritas ID		YHY544			
Sampling Date		2024/02/06 12:00			
COC Number		n/a			
	UNITS	P0001,COMPOSITE GLAZING,LOC:1,MAIN OFFICE	RDL	MDL	QC Batch
PCBs					
Aroclor 1262	ug/g	<1	1	1	9215732
Aroclor 1016	ug/g	<1	1	1	9215732
Aroclor 1221	ug/g	<1	1	1	9215732
Aroclor 1232	ug/g	<1	1	1	9215732
Aroclor 1242	ug/g	<1	1	1	9215732
Aroclor 1248	ug/g	<1	1	1	9215732
Aroclor 1254	ug/g	<1	1	1	9215732
Aroclor 1260	ug/g	<1	1	1	9215732
Aroclor 1268	ug/g	<1	1	1	9215732
Total PCB	ug/g	<1	1	1	9215732
Surrogate Recovery (%)					
Decachlorobiphenyl	%	105			9215732
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C437917
Report Date: 2024/02/15

Pinchin Ltd
Client Project #: 337606
Sampler Initials: TB

TEST SUMMARY

Bureau Veritas ID: YHY544
Sample ID: P0001, COMPOSITE GLAZING, LOC: 1, MAIN OFFICE
Matrix: Solid

Collected: 2024/02/06
Shipped:
Received: 2024/02/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Solids	GC/ECD	9215732	2024/02/12	2024/02/14	Farag Mansour



BUREAU
VERITAS

Bureau Veritas Job #: C437917

Report Date: 2024/02/15

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

GENERAL COMMENTS

Results relate only to the items tested.

BUREAU
VERITAS

Bureau Veritas Job #: C437917

Report Date: 2024/02/15

QUALITY ASSURANCE REPORT

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9215732	Decachlorobiphenyl	2024/02/12	96	30 - 130	98	30 - 130	97	%		
9215732	Aroclor 1016	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1221	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1232	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1242	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1248	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1254	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1260	2024/02/12	126	30 - 130	112	30 - 130	<0.1	ug/g	1.6	50
9215732	Aroclor 1262	2024/02/12					<0.1	ug/g		
9215732	Aroclor 1268	2024/02/12					<0.1	ug/g		
9215732	Total PCB	2024/02/12	126	30 - 130	112	30 - 130	<0.1	ug/g	1.6	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.



FUNDAMENTAL LABORATORY ACCEPTANCE GUIDELINE

Invoice To:

Pinchin Ltd
ATTN: Accounts Payable
662 Falconbridge Road
Unit 3
Sudbury, ON
CANADA P3A 4S4
Client Contact:
Tamara Beaton

Bureau Veritas Job #: C437917
Date Received: 2024/02/07
Your C.O.C. #: n/a
Your Project #: 337606
Bureau Veritas Project Manager: Nilushi Mahathantila
Quote #: C20345

No discrepancies noted.

Report Comments

Received Date:	<u>2024/02/07</u>	Time:	<u>09:37</u>	By:	_____
Inspected Date:	_____	Time:	_____	By:	_____
FLAG Created Date:	_____	Time:	_____	By:	_____



BUREAU
VERITAS

Bureau Veritas Job #: C437917

Report Date: 2024/02/15

Pinchin Ltd

Client Project #: 337606

Sampler Initials: TB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere, Senior Scientific Specialist

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07-Feb-24 09:37

Nilushi Mahathantila



C437917

SBS

ENV-1302



6740 Campobello Road, Mississauga, Ontario L5N 2L8

Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CAM FCD-01191/6

CHAIN OF CUSTODY RECORD

Page ____ of ____

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name: Pinchin Ltd.		Company Name:		Quotation #:		<input checked="" type="checkbox"/> Regular TAT (5-7 days) Most analyses	
Contact Name: Tamara Beaton		Contact Name:		P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:		Address:		Project #: 337606		Rush TAT (Surcharges will be applied)	
Phone:		Phone:		Site Location:		<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3-4 Days	
Fax:		Fax:		Site #:		Date Required:	
Email: tbeaton@pinchin.com		Email:		Site Location Province: ON		Rush Confirmation #:	
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY							
Sampled By: Tamara Beaton							
Regulation 153		Other Regulations		Analysis Requested		LABORATORY USE ONLY	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/ Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/ Other <input type="checkbox"/> Table ____ FOR RSC (PLEASE CIRCLE) Y / N		<input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> PWQO <input type="checkbox"/> Region <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> REG 558 (MIN. 3 DAY TAT REQUIRED) <input type="checkbox"/> REG 406 Table ____		# OF CONTAINERS SUBMITTED FIELD FILTERED (CIRCLE) Metals / Hg / CVI BTEX/ PHC F1 PHCs F2 - F4 VOCs REG 153 METALS & INORGANICS REG 153 ICPMS METALS REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B) Lead (Pb) in Paints PCBs HOLD- DO NOT ANALYZE		CUSTODY SEAL Y / N Present Intact COOLING MEDIA PRESENT: Y / N COMMENTS	
Include Criteria on Certificate of Analysis: Y / N		SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS					
SAMPLE IDENTIFICATION		DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX			
P0001, Composite Glazing, Loc:1, Main Office		06-Feb-24	12:00	BULK			
RELINQUISHED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV JOB #
Tamara Beaton		06-Feb-24	15:00	<i>[Signature]</i>	06-Feb-24	09:37	

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APPENDIX III

Methodology



1.0 GENERAL

An investigation was conducted to identify the type of Hazardous Building Materials incorporated in the structure and its finishes.

Information regarding the location and condition of hazardous building materials encountered and visually estimated quantities were recorded. The locations of any samples collected were recorded on small-scale plans. As-built drawings and previous reports were referenced where provided.

Sample collection was conducted in accordance with our Standard Operating Procedures.

1.1 Asbestos

The investigation for asbestos included friable and non-friable asbestos-containing materials (ACM). A friable material is a material that when dry can be crumbled, pulverized or powdered by hand pressure, or a material that has already become crushed, pulverized, or powdered.

A separate set of samples was collected of each type of homogenous material suspected to contain asbestos. A homogenous material is defined by the US EPA as material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of material. The homogeneous materials were determined by visual examination and available information on the phases of construction and prior renovations.

Samples were collected at a rate that is in compliance with the requirements of local regulations and guidelines. The sampling strategy was also based on known ban dates and phase out dates of the use of asbestos; sampling of certain building materials is not conducted after specific construction dates. In addition, to be conservative, several years past these dates are added to account for some uncertainty in the exact start / finish date of construction and associated usage of ACM. In some cases, manufactured products such as asbestos cement pipe were visually identified without sample confirmation.

The asbestos analysis of select materials was completed using a stop-positive approach. Only one result meeting the regulated criteria was required to determine that a material is asbestos-containing, but all samples must be analyzed to conclusively determine that a material is non-asbestos. The laboratory stopped analyzing samples from a homogeneous material once a result equal to or greater than the regulated criteria is detected in any of the samples of that material. All samples of a homogeneous material were analyzed if no asbestos is detected. In some cases, all samples were analyzed in the sample set regardless of result.

The analysis was performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, July 1993.

Analytical results were compared to the following criteria:

Jurisdiction	Friable	Non-Friable
Ontario	0.5%	0.5%

Where building materials are described in the report as “non-asbestos” or “does not contain asbestos”, this means that either no asbestos was detected by the analytical method utilized in any of the multiple samples or, if detected, it is below the lower limit of an asbestos-containing material in the applicable regulation. Additionally, these terms are used for materials which historically are known to not include asbestos in their manufacturing.

Asbestos materials were evaluated in order to make recommendations regarding any remedial work. The priority for remedial action was based on several factors:

- Friability (friable or non-friable)
- Condition (good, fair, poor, debris)
- Accessibility (ranking from accessible to all building users to inaccessible)
- Visibility (whether the material is obscured by other building components)
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition)

1.2 Lead

Samples of distinctive paint finishes, and surface coatings present in more than a limited application, where removal of the paint is possible were collected. The samples were collected by scraping the painted finish to include base and covering applications.

Analysis for lead in paints or surface coatings was performed in accordance with EPA Method No. 3050B/EPA SW-846-6020B0B, inductively coupled plasma – mass spectrometry.

Analytical results were compared to the following criteria.

Jurisdiction	Units (%)	Units (ppm) / (mg/kg)
Ontario	0.1	1,000

Other lead building products (e.g. batteries, lead sheeting, flashing) were identified by visual observation only.

1.3 Silica

Building materials known to contain crystalline silica (e.g. concrete, cement, tile, brick, masonry, mortar) were identified by visual inspection only. Pinchin did not perform sampling of these materials for laboratory analysis of crystalline silica content.

1.4 Mercury

Building materials, products or equipment (e.g. thermostats, barometers, pressure gauges, lamp tubes), suspected to contain mercury were identified by visual inspection only. Dismantling of equipment suspected of containing mercury was not performed. Sampling of these materials for laboratory analysis of mercury content was not performed.

1.5 Polychlorinated Biphenyls

The potential for light ballast and oil filled transformers to contain PCBs was based on the age of the building, a review of maintenance records, and examination of labels or nameplates on equipment, where present and accessible. The information was compared to known ban dates of PCBs and Environment Canada publications.

Dry type transformers were presumed to be free of dielectric fluids and hence non-PCB.

Fluids (mineral oil, hydraulic, Aroclor or Askarel) in transformers or other equipment were not sampled for PCB content.

Caulking, sealants, or paints were sampled and submitted for PCB analysis following EPA 3550C/8082A.

Sample results are compared to the criteria of 50 mg/kg for solids as stated in the PCB Regulation, SOR/2008-273.

1.6 Visible Mould

The presence of mould or water damage was determined by visual inspection of exposed building surfaces. If any mould growth or water damage was concealed within building cavities it was not addressed in this assessment.

Template Testing

APPENDIX IV
Location Summary Report

Client:Ontario Northland Transportation Commission
Building Name: Light Signals Building
Survey Date: 2024-02-06
Building Phases: A: 1950

Site: Laurier Avenue, North Bay, ON
Last Re-Assessment:

Location No.	Name or Description	Area ft²	Floor No.	Bldg. Phase	Notes
1	Main Office	500	1	A	
2	Vestibule	30	1	A	
3	Office	350	1	A	
4	Storage	200	1	A	
5	Washroom	30	1	A	
6	Garage	300	1	A	
7	Exterior	0	EXTERIOR	A	
8	Attic	1500	Attic	A	Access point located in Garage (Loc. 6)

APPENDIX V
Hazardous Materials Summary Report / Sample Log

Client: Ontario Northland Transportation Commission

Site: Laurier Avenue, North Bay, ON

Building Name: Light Signals Building

Survey Date: 2024-02-06

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
Asbestos	S0001 ABC	Wall Cement Product	1,3,4,5	A	0	3200	0	0	Chrysotile	Yes	NF
Asbestos	S0002 ABC	Floor Mastic, Black	1	A	90	0	0	0	None Detected	No	
Asbestos	S0003 ABC	Wall Window Caulking Grey Glazing	1,3,4,5,6	A	229	0	0	0	None Detected	No	
Asbestos	S0004 ABC	Floor Vinyl Floor Tile 12" X 12" White	4	A	0	200	0	0	Chrysotile	Yes	NF
Asbestos	S0005 ABC	Floor Vinyl Floor Tile 12" X 12" White Fleck	3	A	0	350	0	0	Chrysotile	Yes	NF
Asbestos	S0006 ABC	Floor Vinyl Floor Tile And Mastic 9" X 9" Purple	5	A	0	30	0	0	Chrysotile	Yes	NF
Asbestos	S0007 ABC	Wall Tar Paper	1,3,4,5	A	0	3150	0	0	None Detected	No	
Asbestos	S0008 ABC	Wall Window Caulking Brown Glazing	1	A	15	0	0	0	None Detected	No	
Asbestos	V0000	Floor Mastic 12" X 12" White Fleck	3,4	A	0	550	0	0	Non Asbestos	No	
Asbestos	V0000	Structure Fibreglass	8	A	0	1500	0	0	Non Asbestos	No	
Paint	L0001	Floor Concrete (poured) Grey	1,2,6	A	0	830	0	0	Lead (High)	Yes	-
Paint	L0002	Ceiling Metal White	1,2,3,4,5	A	0	1210	0	0	Lead (Low)	Yes	-
Paint	L0003	Wall Metal Blue	1,2,7	A	0	120	0	0	Lead (High)	Yes	-
Paint	L0004	Wall Metal Orange	3,4	A	0	80	0	0	Lead (High)	Yes	-
Paint	L0005	Wall Cement Product White	1,3,4,5	A	0	3200	0	0	Lead (High)	Yes	-
Paint	L0006	Wall Metal White	6,7	A	0	3300	0	0	Lead (High)	Yes	-
Paint	L0007	Wall Wood Blue	7	A	0	50	0	0	Lead (Low)	Yes	-
Lead Product	V9000	Bell And Spigot Fittings	5	A	0	0	1	0	Lead Product	Yes	-
PCB	P0001	Caulking Glazing Composite	1,3,4,5,6	A	229	0	0	0	-	No	-
PCB	V9500	Light Ballasts	1,3,4,5	A	0	0	13	0	Presumed PCB	Yes	-
Mould	V9000	Paper	4	A	0	5	0	0	Mould	Yes	-
Hg	V9000	Light Fixture	1,3,4,5	A	0	0	20	0	Hg	Yes	-
Hg	V9000	Thermostat	3	A	0	0	1	0	Hg	Yes	-

Legend:

Sample number		Units			
S####	Asbestos sample collected	SF	Square feet	NF	Non Friable material.
L####	Paint sample collected	LF	Linear feet	F	Friable material
P####	PCB sample collected	EA	Each	PF	Potentially Friable material
M####	Mould sample collected	%	Percentage		
V####	Material visually similar to numbered sample collected				
V0000	Known non Hazardous Material				
V9000	Material is visually identified as Hazardous Material				
V9500	Material is presumed to be Hazardous Material				
[Loc. No.]	Abated Material				

APPENDIX VI
All Data Report

ALL DATA REPORT

Client: Ontario Northland Transportation
Commission
Location: #1 : Main Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 500

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Metal			A	Y		500			SF					
Duct		Not Insulated			A	Y										
Floor		Concrete (poured)			A	Y		500			SF					
Floor		Mastic, Black			A	Y		90			LF	S0002ABC	None Detected	N.D.	None	
Mechanical Equipment	Furnace	Not Insulated			A	Y		1			EA					
Piping		None Found														
Structure		Wood			D	N		500			SF					
Wall		Cement Product			A	Y		1500			SF	S0001A	Chrysotile	10-25%	Confirmed Asbestos	NF
Wall		Tar Paper		Cement Product	D	N		1500			SF	S0007ABC	None Detected	N.D.	None	
Wall	Window	Caulking, Grey glazing			A	Y		65			LF	S0003ABC	None Detected	N.D.	None	
Wall	Window	Caulking, Brown glazing			A	Y		15			LF	S0008ABC	None Detected	N.D.	None	

Client: Ontario Northland Transportation
Commission
Location: #1 : Main Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 500

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Floor	Concrete (poured)	250	250	SF	L0001	Grey	Pb: 0.64 %	Lead (High)	
Ceiling	Metal	250	250	SF	L0002	White	Pb: 0.073 %	Lead (Low)	
Wall	Metal	20	20	SF	L0003	Blue	Pb: 0.90 %	Lead (High)	
Wall	Cement Product	1500		SF	L0005	White	Pb: 0.29 %	Lead (High)	

Client: Ontario Northland Transportation
Commission
Location: #1 : Main Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 500

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	4	EA	V9000	Yes

Client: Ontario Northland Transportation
Commission
Location: #1 : Main Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 500

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	5	EA	V9500			Presumed
Caulking	65	LF	P0001	Glazing composite	<1 mg/kg	No

ALL DATA REPORT

Client: Ontario Northland Transportation Commission
Location: #2 : Vestibule
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Metal			A	Y		30			SF					
Duct		None Found														
Floor		Concrete (poured)			A	Y		30			SF					
Mechanical Equipment		None Found														
Piping		None Found														
Wall		Metal			A	Y		100			SF					

Client: Ontario Northland Transportation Commission
Location: #2 : Vestibule
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Floor	Concrete (poured)	30		SF	V0001	Grey	Pb: 0.64 %	Lead (High)	
Wall	Metal	20	20	SF	V0003	Blue	Pb: 0.90 %	Lead (High)	
Ceiling	Metal	30		SF	V0002	White	Pb: 0.073 %	Lead (Low)	
Wall	Metal	100		SF	V0002	White	Pb: 0.073 %	Lead (Low)	

Client: Ontario Northland Transportation
Commission
Location: #3 : Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 350

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Metal			A	Y		350			SF					
Duct		Not Insulated			A	Y										
Floor		Wood		Vinyl Floor Tile	A	N		350			SF					
Floor ¹		Mastic, 12" x 12" white fleck		Vinyl Floor Tile	A	N		350			SF	V0000	[None]		[None]	
Floor		Vinyl Floor Tile, 12" x 12" white fleck			A	Y		350			SF	S0005ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Mechanical Equipment		None Found														
Piping		None Found														
Structure		Wood			D	N		350			SF					
Wall		Cement Product			A	Y		1000			SF	S0001B	Chrysotile	10-25%	Confirmed Asbestos	NF
Wall		Tar Paper		Cement Product	D	N		1000			SF	V0007	None Detected	N.D.	None	
Wall	Window	Caulking, Grey glazing			A	Y		50			LF	V0003	None Detected	N.D.	None	

1 - S0005 layer 2

Client: Ontario Northland Transportation
Commission
Location: #3 : Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 350

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Ceiling	Metal	350		SF	V0002	White	Pb: 0.073 %	Lead (Low)	
Wall	Metal	40		SF	V0004	Orange	Pb: 1.4 %	Lead (High)	
Wall	Cement Product	1000		SF	V0005	White	Pb: 0.29 %	Lead (High)	

Client: Ontario Northland Transportation
Commission
Location: #3 : Office
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 350

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	8	EA	V9000	Yes
Thermostat	1	EA	V9000	Yes

Client: Ontario Northland Transportation
Commission
Location: #3 : Office
2024-02-16

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:

Area (sqft): 350

Quantities shown above are based on visual approximations only and may be subject to variation. Copyright Pinchin Ltd. 2024

Survey Date: 2024-02-06

Last Re-Assessment: 0000-00-00

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	4	EA	V9500			Presumed
Caulking	50	LF	V0001	Glazing composite	<1 mg/kg	No

Client: Ontario Northland Transportation Commission
Location: #4 : Storage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 200

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Metal			A	Y		200			SF					
Duct		Not Insulated			A	Y										
Floor		Wood		Vinyl Floor Tile	A	N		200			SF					
Floor ¹		Mastic, 12" x 12" white fleck		Vinyl Floor Tile	A	Y		200			SF	V0000	[None]		[None]	
Floor		Vinyl Floor Tile, 12" x 12" white fleck			A	Y		200			SF	S0004ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Mechanical Equipment		None Found														
Piping		None Found														
Structure		Wood			D	N		200			SF					
Wall		Cement Product			A	Y		600			SF	S0001C	Chrysotile	10-25%	Confirmed Asbestos	NF
Wall		Tar Paper		Cement Product	D	N		600			SF	V0007	None Detected	N.D.	None	
Wall	Window	Caulking, Grey glazing			A	Y		50			LF	V0003	None Detected	N.D.	None	

1 - S0004 - layer 2

Client: Ontario Northland Transportation Commission
Location: #4 : Storage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 200

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Ceiling	Metal	200		SF	V0002	White	Pb: 0.073 %	Lead (Low)	
Wall	Metal	40		SF	L0004	Orange	Pb: 1.4 %	Lead (High)	
Wall	Cement Product	600		SF	V0005	White	Pb: 0.29 %	Lead (High)	

Client: Ontario Northland Transportation Commission
Location: #4 : Storage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 200

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	6	EA	V9000	Yes

Client: Ontario Northland Transportation Commission
Location: #4 : Storage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 200

2024-02-16

Quantities shown above are based on visual approximations ONLY and may be subject to variation. Copyright Pinchin Ltd. 2024

Page 6 of 13.

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	3	EA	V9500			Presumed
Caulking	50	LF	V0001	Glazing composite	<1 mg/kg	No

Client: Ontario Northland Transportation
Commission
Location: #4 : Storage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 200

MOULD								
System	Material	Visible	Quantity	Unit	Sample Type	Sample No	Sample Description	Mould
Other ¹	Paper	Y	5	SF	V	9000		Yes

1 - on files

ALL DATA REPORT

Client: Ontario Northland Transportation Commission
Location: #5 : Washroom
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Metal			A	Y		30			SF					
Duct		None Found			A	Y										
Floor		Concrete (poured)		Vinyl Floor Tile	A	Y		30			SF					
Floor		Vinyl Floor Tile and Mastic, 9" x 9" purple			A	Y		30			SF	S0006ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Mechanical Equipment	Heating Water Tank	Fibreglass		Metal	A	Y		1			EA					
Piping		Not Insulated														
Structure		Wood			D	N		30			SF					
Wall		Cement Product			A	Y		100			SF	V0001	Chrysotile	10-25%	Confirmed Asbestos	NF
Wall		Tar Paper		Cement Product	D	N		50			SF	V0007	None Detected	N.D.	None	
Wall	Window	Caulking, Grey glazing			A	Y		14			LF	V0003	None Detected	N.D.	None	

Client: Ontario Northland Transportation Commission
Location: #5 : Washroom
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Ceiling	Metal	30		SF	V0002	White	Pb: 0.073 %	Lead (Low)	
Wall	Cement Product	100		SF	V0005	White	Pb: 0.29 %	Lead (High)	

Client: Ontario Northland Transportation Commission
Location: #5 : Washroom
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Bell And Spigot Fittings	1	EA	V9000	Yes

Client: Ontario Northland Transportation Commission
Location: #5 : Washroom
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture	2	EA	V9000	Yes

Client: Ontario Northland Transportation
Commission
Location: #5 : Washroom
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 30

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Light Ballasts	1	EA	V9500			Presumed
Caulking	14	LF	V0001	Glazing composite	<1 mg/kg	No

ALL DATA REPORT

Client: Ontario Northland Transportation
Commission
Location: #6 : Garage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 300

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Wood			A	Y		300			SF					
Duct		None Found														
Floor		Concrete (poured)			A	Y		300			SF					
Mechanical Equipment		None Found														
Piping		None Found														
Structure		Wood			D	N		300			SF					
Wall		Wood			A	Y		600			SF					
Wall		Metal			A	Y		300			SF					
Wall	Window	Caulking, Grey glazing			A	Y		50			LF	V0003	None Detected	N.D.	None	

Client: Ontario Northland Transportation
Commission
Location: #6 : Garage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 300

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Floor	Concrete (poured)	300		SF	V0001	Grey	Pb: 0.64 %	Lead (High)	
Wall	Metal	300		SF	V0006	White	Pb: 0.40 %	Lead (High)	

Client: Ontario Northland Transportation
Commission
Location: #6 : Garage
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: 1

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00

Area (sqft): 300

PCB						
Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
Caulking	50	LF	V0001	Grey glazing	<1 mg/kg	No

Client: Ontario Northland Transportation
Commission
Location: #7 : Exterior
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: EXTERIOR

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 0

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Duct	Roof	Not Insulated			C	Y										
Structure		Metal			A	Y										
Wall		Metal				A	Y									

Client: Ontario Northland Transportation
Commission
Location: #7 : Exterior
Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON
Floor: EXTERIOR

Building Name: Light Signals Building
Room #:
Last Re-Assessment: 0000-00-00
Area (sqft): 0

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Wall	Metal	2500	500	SF	L0006	White	Pb: 0.40 %	Lead (High)	
Wall	Wood	50		SF	L0007	Blue	Pb: 0.013 %	Lead (Low)	
Wall	Metal	40		SF	V0003	Blue	Pb: 0.90 %	Lead (High)	

Client: Ontario Northland Transportation Commission

Location: #8 : Attic

Survey Date: 2024-02-06

Site: Laurier Avenue, North Bay, ON

Floor: Attic

Building Name: Light Signals Building

Room #:

Last Re-Assessment: 0000-00-00

Area (sqft): 1500

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Structure		Fibreglass			C	N		1500			SF	V0000	Non-Asbestos		None	

Access point located in Garage (Loc. 6)

Legend:

Sample number		Units		Other	
S####	Asbestos sample collected	SF	Square feet	A	Access
L####	Paint sample collected	LF	Linear feet	V	Visible
P####	PCB sample collected	EA	Each	AP	Air Plenum
M####	Mould sample collected	%	Percentage	F	Friable material
V####	Material is visually identified to be identical to S####	LF	Linear feet	NF	Non Friable material
V0000	Known non hazardous material			PF	Potentially Friable material
V9000	Material visually identified as a Hazardous Material			Pb	Lead
V9500	Material is presumed to be a hazardous material			Hg	Mercury
				As	Arsenic
				Cr	Chromium

Access

A	Accessible to all building occupants
B	Accessible to maintenance and operations staff without a ladder
C	Accessible to maintenance and operations staff with a ladder. Also rarely entered, locked areas
D	Not normally accessible

Condition

Good	No visible damage or deterioration
Fair	Minor, repairable damage, cracking, delamination or deterioration
Poor	Irreparable damage or deterioration with exposed and missing material

Visible

Y	The material is visible when standing on the floor of the room, without the removal or opening of other building components (e.g. ceiling tiles or access panels).
N	The material is not visible to view when standing on the floor of the room and requires the removal of a building component (e.g. ceilings tiles or access panels) to view and access. Includes rarely entered crawlspaces, attic spaces, etc. Observations will be limited to the extent visible from the access points.

Air Plenum

Yes or No	The material is in a return air plenum or in a direct airstream or there is evidence of air erosion (e.g. duct for heating or cooling blowing directly on or across an ACM). This field is only completed where Air Plenum consideration is required by regulation.
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Colour Coding

	The material is known to contain regulated concentrations of asbestos; either by analytical results or visible identification (use of the V9000 code).
	The material is presumed to contain asbestos; based on visual appearances; typically a material known to historically contain asbestos; however, not sampled due to limited access or the destructive nature of the sampling.

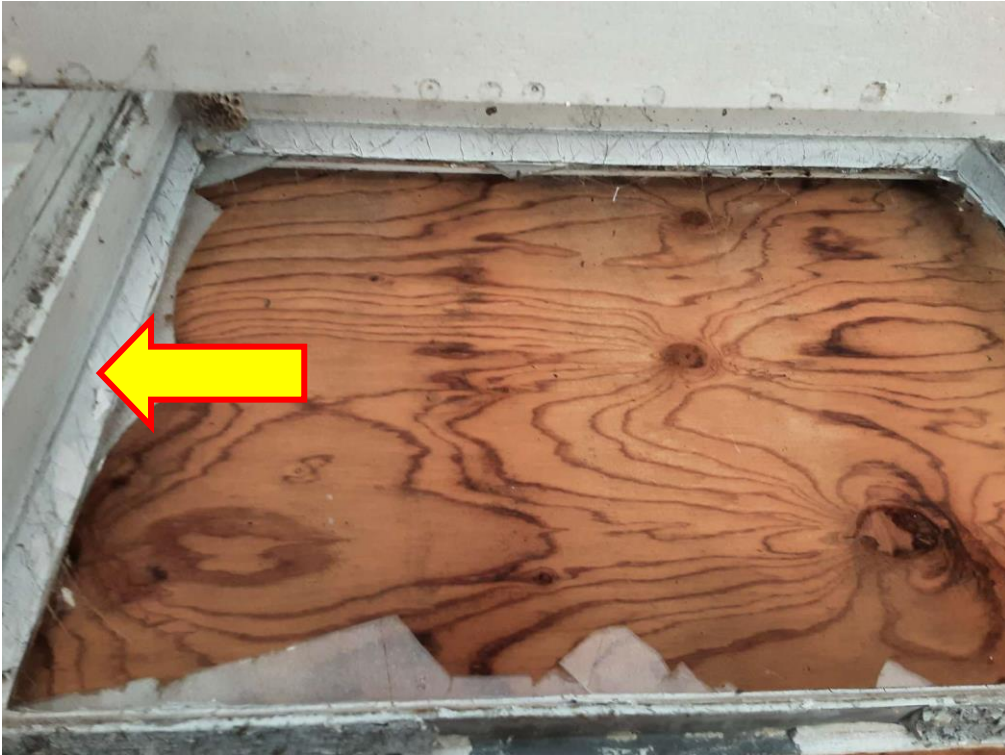
APPENDIX VII
Photographs



S0001A (Confirmed Asbestos), Wall, Cement Product, Main Office (Location #: 1)



S0002C (None), Floor, Mastic, Black, Main Office (Location #: 1)



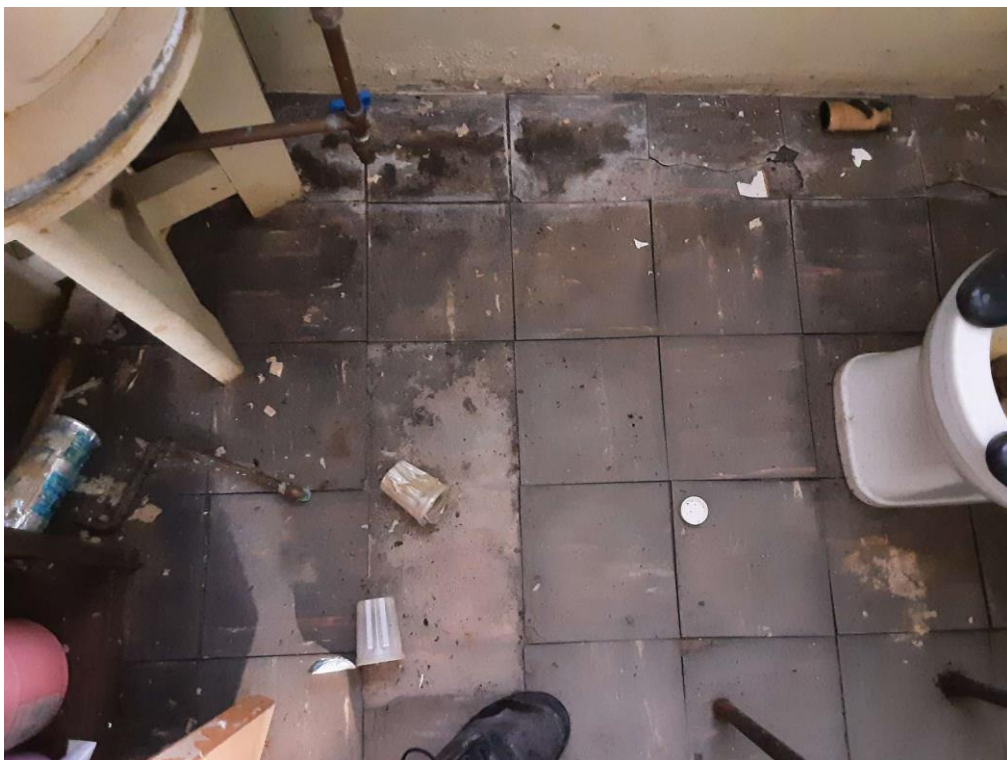
S0003A (None), Grey glazing, Wall, Window, Caulking, Main Office (Location #: 1)



S0004C (Confirmed Asbestos), 12" x 12" White, Floor, Vinyl Floor Tile, Storage (Location #: 4)



S0005C (Confirmed Asbestos), 12" x 12" white Fleck, Floor, Vinyl Floor Tile, Office (Location #: 3)



S0006C (Confirmed Asbestos), 9" x 9" Purple, Floor, Vinyl Floor Tile and Mastic, Washroom (Location #: 5)



S0007C (None), Wall, Tar Paper, Main Office (Location #: 1)



Mechanical Equipment, Furnace, Not Insulated, Main Office (Location #: 1)



Duct, Not Insulated, Main Office (Location #: 1)



Piping, Not Insulated, Washroom (Location #: 5)



Mechanical Equipment, Heating Water Tank, Fiberglass (metal covering), Washroom (Location #: 5)



L0001(Lead, High), Grey, Floor, Main Office (Location #: 1)



L0002(Lead, Low), White, Ceiling, Main Office (Location #: 1)



L0003(Lead, High), Blue, Door, Main Office (Location #: 1)



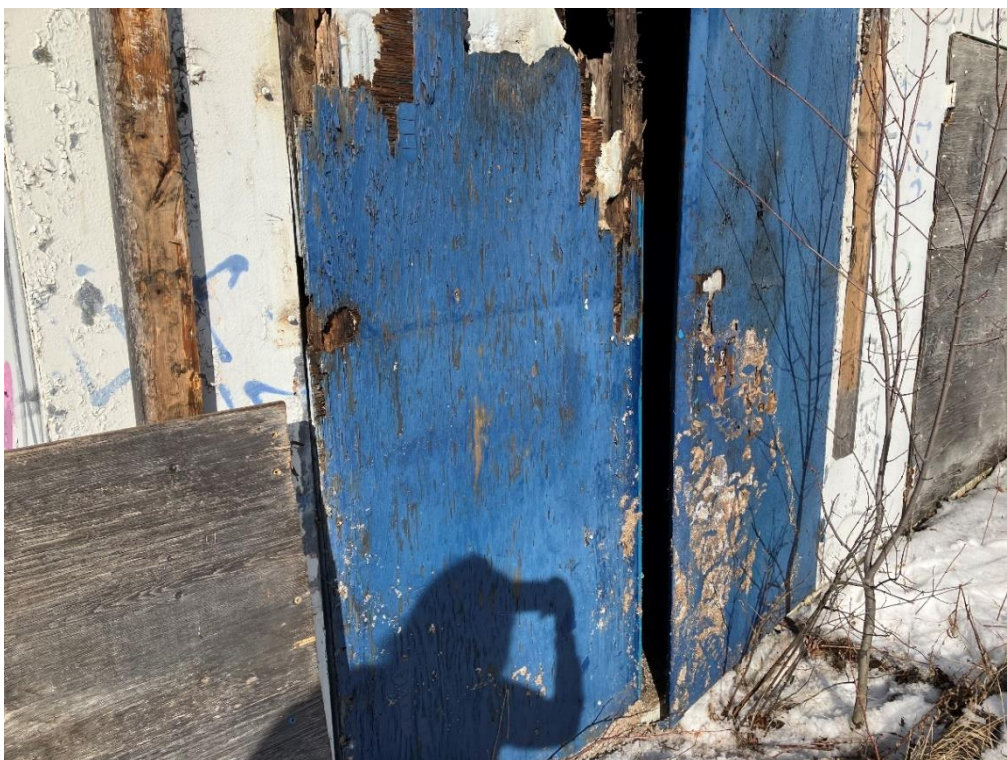
L0004(Lead, High), Orange, Door, Storage (Location #: 4)



L0005(Lead, High), White, Wall, Main Office (Location #: 1)



L0006(Lead, High), White, Wall, Exterior (Location #: 7)



L0007(Lead, Low), Blue, Door, Exterior (Location #: 7)



Pb Products, V9000(Yes), BELL AND SPIGOT FITTINGS, Washroom (Location #: 5)



Mercury, V9000(Yes), LIGHT FIXTURE, Main Office (Location #: 1)



Mercury, V9000(Yes), THERMOSTAT, Office (Location #: 3)



PCB, V9500(Presumed), LIGHT BALLASTS, Main Office (Location #: 1)

August 2023

DESIGNATED SUBSTANCES SURVEY REPORT

***ONTARIO NORTHLAND
COCHRANE MAINTENANCE BUILDINGS
COCHRANE, ONTARIO***



Prepared by:

THOMAS CONTRACTING

Project No. TC-201612

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APPENDICES

APPENDIX A – Asbestos Lab Transcripts & Sample Photos
APPENDIX B – Lead Lab Transcripts & Sample Photos
APPENDIX C – Ballast & Thermostat & Electrical Transformer Photos
APPENDIX D – Building by Building DSS Findings



THOMAS CONTRACTING

212 A Birchgrove Dr. East
Callander, Ontario
POH 1H0

PHONE : (705) 499 – 8006
EMAIL : asbestos@vianet.ca

Reference: TC - 201612

July 25th, 2023

ONTARIO NORTHLAND

555 Oak Street East
North Bay, ON
P1B 8L3

ATTENTION: Alain Tremblay – Project Manager – Facilities

Dear Sirs:

DESIGNATED SUBSTANCES SURVEY Cochrane Maintenance Buildings Cochrane, Ontario

1.0 INTRODUCTION

Thomas Contracting was commissioned by the Ontario Northland Transportation Commission (ONTC) to complete a designated substances survey (DSS) of their twenty-four maintenance buildings located in Cochrane, 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 within the buildings prior to any up-coming renovation or demolition work. This survey does not include and was not intended to cover any investigation of subsurface hazardous materials / designated substances.

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

The study area under this assessment consisted of twenty-four (24) separate buildings (see photos #1 to #23 in Appendix 'A') located on the subject property consisting of the following.

Building	Photo #	Building Construction (exterior)
Watering Shack #1	1	Wood Construction
Watering Shack #2	2	Wood Construction – Metal Clad Walls & Roof
Coach Cleaner Storage Shed	3	Wood Construction – Metal Clad Walls & Roof

<i>Coach Shop</i>	<i>4</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Wheel Drop Pit Shelter</i>	<i>5</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Stores</i>	<i>6</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Locomotive Sanding Tower</i>	<i>7</i>	<i>Steel Construction</i>
<i>Powerhouse</i>	<i>8</i>	<i>Steel Construction – Brick Walls & Built-up Roof</i>
<i>Scale Building</i>	<i>9</i>	<i>Wood Construction – Metal Roof & Wood Walls</i>
<i>Tool Shed</i>	<i>10</i>	<i>Wood Construction – Shingle Roof & Wood Walls</i>
<i>Storage Shed #1</i>	<i>11</i>	<i>Wood Construction – Shingle Roof & Wood Walls</i>
<i>Maintenance of Way Storage Shed</i>	<i>12</i>	<i>Wood Construction – Metal Walls & Shingle Roof</i>
<i>Rip Track Fuel Shed</i>	<i>13</i>	<i>Wood Construction – Shingle Roof & Wood Walls</i>
<i>Rip Track Building</i>	<i>14</i>	<i>Wood Construction – Shingle Roof & Wood Walls</i>
<i>Outside Repair Track Equipment Shed (Sea Cans)</i>	<i>15 & 16</i>	<i>Steel Construction</i>
<i>Coach Sewer Dump Storage Shed</i>	<i>17</i>	<i>Wood Construction – Metal Clad Walls & Roof</i>
<i>Freight Shed</i>	<i>18</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Locomotive Fueling Facility</i>	<i>19</i>	<i>Steel / Metal Construction</i>
<i>Green Shed</i>	<i>20</i>	<i>Steel / Metal Construction</i>
<i>MOW Water Shed</i>	<i>21</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Diesel Shop</i>	<i>22</i>	<i>Steel Construction – Metal Walls & Built-up Roof</i>
<i>Yard Office</i>	<i>23</i>	<i>Steel Construction – Metal Clad Walls & Roof</i>
<i>Blower Shed</i>	<i>-</i>	<i>DSS previously conducted on this building</i>
<i>Maintenance of Way Bunkhouse</i>	<i>-</i>	<i>DSS previously conducted on this building</i>
<i>Mechanical Bunkhouse</i>	<i>-</i>	<i>DSS previously conducted on this building</i>

3.0 STUDY METHODOLOGY

Thomas Contracting personnel conducted the DSS fieldwork of the buildings noted above between June 14th to the 29th, 2023, 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 and lead-containing paint were forwarded to our laboratory subconsultant for positive identification of asbestos fibres and lead content levels.

4.0 **ASBESTOS-CONTAINING MATERIALS (ACM's)**

The DSS fieldwork resulted in the retrieval of fifty-eight (58) representative samples of potential asbestos-containing building material of which one hundred and seven (107) tests were required/performed under Ont. Reg. 278/05). The potential ACM sampled consisted of tar roofing shingles, ceiling tiles, mortar, drywall board & mud, Scratch coat, pipe insulation, caulking, window glazing and "Transite" wall board. 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'. Locations containing ACM's representative of the obtained bulk samples are shown in the "Building by Building DSS Findings" table in Appendix 'D'.

Table 1
Summary of Asbestos Bulk Sample Results

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 1	24	Watering Shack #1	Tar roofing shingles (brown)	None Detected
CA – 1A	-	Watering Shack #1	Tar roofing shingles (brown)	None Detected
CA – 1B	-	Watering Shack #1	Tar roofing shingles (brown)	None Detected
CA – 2	25	Coach Cleaner Storage Shed	Exterior caulking (white) located at wall and metal roof seams.	3% Chrysotile
CA – 2A	-	Coach Cleaner Storage Shed	Exterior caulking (white) located at wall and metal roof seams.	Stop Positive
CA – 2B	-	Coach Cleaner Storage Shed	Exterior caulking (white) located at wall and metal roof seams.	Stop Positive
CA – 3	26	Coach Cleaner Storage Shed	Exterior door and wall patch caulking (white).	None detected
CA – 3A	-	Coach Cleaner Storage Shed	Exterior door and wall patch caulking (white).	None detected
CA – 3B	-	Coach Cleaner Storage Shed	Exterior door and wall patch caulking (white).	None detected
CA – 4	27	Coach Shop	2' x 4' drop ceiling tile located within the lunchroom.	None detected
CA – 4A	-	Coach Shop	2' x 4' drop ceiling tile located within the lunchroom.	None detected
CA – 4B	-	Coach Shop	2' x 4' drop ceiling tile located within the lunchroom.	None detected
CA – 5	28	Coach Shop	12" x 12" vinyl floor tile (grey) located within the lunchroom.	None detected
CA – 5A	-	Coach Shop	12" x 12" vinyl floor tile (grey) located within the lunchroom.	None detected
CA – 5B	-	Coach Shop	12" x 12" vinyl floor tile (grey) located within the lunchroom.	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 6	29	Coach Shop	Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase).	None detected
CA – 6A	-	Coach Shop	Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase).	None detected
CA – 6B	-	Coach Shop	Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase).	None detected
CA – 7	30	Coach Shop	Exterior window and door caulking (clear).	None detected
CA – 7A	-	Coach Shop	Exterior window and door caulking (clear).	None detected
CA – 7B	-	Coach Shop	Exterior window and door caulking (clear).	None detected
CA – 8	31	Powerhouse	Exterior door caulking (white)	None detected
CA – 8A	-	Powerhouse	Exterior door caulking (white)	None detected
CA – 8B	-	Powerhouse	Exterior door caulking (white)	None detected
CA – 9	32	Powerhouse	Exterior window caulking (white).	None detected
CA – 9A	-	Powerhouse	Exterior window caulking (white).	None detected
CA – 9B	-	Powerhouse	Exterior window caulking (white).	None detected
CA – 10	33	Powerhouse	Exterior caulking (black) used at electrical cable wall penetrations.	None detected
CA – 10A	-	Powerhouse	Exterior caulking (black) used at electrical cable wall penetrations.	None detected
CA – 10B	-	Powerhouse	Exterior caulking (black) used at electrical cable wall penetrations.	None detected
CA – 11	34	Powerhouse	Exterior brick mortar (grey)	None detected
CA – 11A	-	Powerhouse	Exterior brick mortar (grey)	None detected
CA – 11B	-	Powerhouse	Exterior brick mortar (grey)	None detected
CA – 12	35	Powerhouse	Interior ceramic wall tile mortar (grey)	None detected
CA – 12A	-	Powerhouse	Interior ceramic wall tile mortar (grey)	None detected
CA – 12B	-	Powerhouse	Interior ceramic wall tile mortar (grey)	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 13	36	Scale Building	Exterior window and door caulking (white)	None detected
CA – 13A	-	Scale Building	Exterior window and door caulking (white)	None detected
CA – 13B	-	Scale Building	Exterior window and door caulking (white)	None detected
CA – 14	37	Scale Building	Roll tar sheeting located over exterior weight scale deck	None detected
CA – 14A	-	Scale Building	Roll tar sheeting located over exterior weight scale deck	None detected
CA – 14B	-	Scale Building	Roll tar sheeting located over exterior weight scale deck	None detected
CA – 15	38	Tool Shed	Tar roofing shingles (black)	None detected
CA – 15A	-	Tool Shed	Tar roofing shingles (black)	None detected
CA – 15B	-	Tool Shed	Tar roofing shingles (black)	None detected
CA – 16	39	Storage Shed #1	Tar roofing shingles (black)	None detected
CA – 16A	-	Storage Shed #1	Tar roofing shingles (black)	None detected
CA – 16B	-	Storage Shed #1	Tar roofing shingles (black)	None detected
CA – 17	40	MOW Storage Shed	Tar roofing shingles (green).	None detected
CA – 17A	-	MOW Storage Shed	Tar roofing shingles (green).	None detected
CA – 17B	-	MOW Storage Shed	Tar roofing shingles (green).	None detected
CA – 18	41	Rip Track Fuel Shed	Tar roofing shingles (black)	None detected
CA – 18A	-	Rip Track Fuel Shed	Tar roofing shingles (black)	None detected
CA – 18B	-	Rip Track Fuel Shed	Tar roofing shingles (black)	None detected
CA – 19	42	Rip Track Fuel Shed	Window glazing (white)	Trace
CA – 19A	-	Rip Track Fuel Shed	Window glazing (white)	0.5% Chrysotile
CA – 19B	-	Rip Track Fuel Shed	Window glazing (white)	Stop Positive
CA – 20	43	Rip Track Building	Tar roofing shingles (grey)	None detected
CA – 20A	-	Rip Track Building	Tar roofing shingles (grey)	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 20B	-	Rip Track Building	Tar roofing shingles (grey)	None detected
CA – 21	44	Rip Track Building	Exterior door caulking (brown)	None detected
CA – 21A	-	Rip Track Building	Exterior door caulking (brown)	None detected
CA – 21B	-	Rip Track Building	Exterior door caulking (brown)	None detected
CA – 22	45	Coach Sewer Dump Storage Shed	Exterior door and wall penetrations caulking (white)	Trace
CA – 22A	-	Coach Sewer Dump Storage Shed	Exterior door and wall penetrations caulking (white)	0.5% Chrysotile
CA – 22B	-	Coach Sewer Dump Storage Shed	Exterior door and wall penetrations caulking (white)	Stop Positive
CA – 23	46	Freight Shed	Drywall joint compound (mud) located on Office walls.	None detected
CA – 23A	-	Freight Shed	Drywall joint compound (mud) located on Office walls.	None detected
CA – 23B	-	Freight Shed	Drywall joint compound (mud) located on Office walls.	None detected
CA – 24	47	Freight Shed	Drywall board located on Office walls.	None detected
CA – 24A	-	Freight Shed	Drywall board located on Office walls.	None detected
CA – 24B	-	Freight Shed	Drywall board located on Office walls.	None detected
CA – 25	48	Freight Shed	Scratch coat on concrete walls within basement area	None detected
CA – 25A	-	Freight Shed	Scratch coat on concrete walls within basement area	None detected
CA – 25B	-	Freight Shed	Scratch coat on concrete walls within basement area	None detected
CA – 26	49	Freight Shed	2' x 4' drop ceiling tile located within the basement office	None detected
CA – 26A	-	Freight Shed	2' x 4' drop ceiling tile located within the basement office	None detected
CA – 26B	-	Freight Shed	2' x 4' drop ceiling tile located within the basement office	None detected
CA – 27	50	Freight Shed	Exterior scratch coat on concrete foundation walls	None detected
CA – 27A	-	Freight Shed	Exterior scratch coat on concrete foundation walls	None detected
CA – 27B	-	Freight Shed	Exterior scratch coat on concrete foundation walls	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 28	51	Freight Shed	2' x 4' drop ceiling tile located within the main floor office area	None detected
CA – 28A	-	Freight Shed	2' x 4' drop ceiling tile located within the main floor office area	None detected
CA – 28B	-	Freight Shed	2' x 4' drop ceiling tile located within the main floor office area	None detected
CA – 29	52	Locomotive Fueling Facility	Caulking (black) located on the retaining wall around the diesel tanks.	None detected
CA – 29A	-	Locomotive Fueling Facility	Caulking (black) located on the retaining wall around the diesel tanks.	None detected
CA – 29B	-	Locomotive Fueling Facility	Caulking (black) located on the retaining wall around the diesel tanks.	None detected
CA – 30	53	Locomotive Fueling Facility	Caulking (silver) located around wall penetrations on the Quonset Hut building.	None detected
CA – 30A	-	Locomotive Fueling Facility	Caulking (silver) located around wall penetrations on the Quonset Hut building.	None detected
CA – 30B	-	Locomotive Fueling Facility	Caulking (silver) located around wall penetrations on the Quonset Hut building.	None detected
CA – 31	54	Green Shed	Exterior window caulking (clear)	None detected
CA – 31A	-	Green Shed	Exterior window caulking (clear)	None detected
CA – 31B	-	Green Shed	Exterior window caulking (clear)	None detected
CA – 32	55	MOW Water Shed	Resin coated flooring (green)	None detected
CA – 32A	-	MOW Water Shed	Resin coated flooring (green)	None detected
CA – 32B	-	MOW Water Shed	Resin coated flooring (green)	None detected
CA – 33	56	MOW Water Shed	Interior "Transite" wall panels	40% Chrysotile
CA – 33A	-	MOW Water Shed	Interior "Transite" wall panels	Stop Positive
CA – 33B	-	MOW Water Shed	Interior "Transite" wall panels	Stop Positive

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 34	57	Diesel Shop	Scratch coat located on exterior foundation walls	None detected
CA – 34A	-	Diesel Shop	Scratch coat located on exterior foundation walls	None detected
CA – 34B	-	Diesel Shop	Scratch coat located on exterior foundation walls	None detected
CA – 35	58	Diesel Shop	Caulking (brown) used on roof top HVAC unit	None detected
CA – 35A	-	Diesel Shop	Caulking (brown) used on roof top HVAC unit	None detected
CA – 35B	-	Diesel Shop	Caulking (brown) used on roof top HVAC unit	None detected
CA – 36	59	Diesel Shop	Interior wall and ceiling insulation within the roof top HVAC unit	None detected
CA – 36A	-	Diesel Shop	Interior wall and ceiling insulation within the roof top HVAC unit	None detected
CA – 36B	-	Diesel Shop	Interior wall and ceiling insulation within the roof top HVAC unit	None detected
CA – 37	60	Diesel Shop	Exterior window and door caulking (clear)	None detected
CA – 37A	-	Diesel Shop	Exterior window and door caulking (clear)	None detected
CA – 37B	-	Diesel Shop	Exterior window and door caulking (clear)	None detected
CA – 38	61	Diesel Shop	12" x 12" vinyl floor tile (grey) and mastic located within Office #1	None detected
CA – 38A	-	Diesel Shop	12" x 12" vinyl floor tile (grey) and mastic located within Office #1	None detected
CA – 38B	-	Diesel Shop	12" x 12" vinyl floor tile (grey) and mastic located within Office #1	None detected
CA – 39	62	Diesel Shop	2' x 4' drop ceiling tile located within Office #1	None detected
CA – 39A	-	Diesel Shop	2' x 4' drop ceiling tile located within Office #1	None detected
CA – 39B	-	Diesel Shop	2' x 4' drop ceiling tile located within Office #1	None detected
CA – 40	63	Diesel Shop	Drywall joint compound (mud) located within Office #1	None detected
CA – 40A	-	Diesel Shop	Drywall joint compound (mud) located within Office #1	None detected
CA – 40B	-	Diesel Shop	Drywall joint compound (mud) located within Office #1	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 41	64	Diesel Shop	12" x 12" ceiling tile mastic (brown) located within Office #2	None detected
CA – 41A	-	Diesel Shop	12" x 12" ceiling tile mastic (brown) located within Office #2	None detected
CA – 41B	-	Diesel Shop	12" x 12" ceiling tile mastic (brown) located within Office #2	None detected
CA – 42	65	Diesel Shop	Drywall board (walls) located within Office #2	None detected
CA – 42A	-	Diesel Shop	Drywall board (walls) located within Office #2	None detected
CA – 42B	-	Diesel Shop	Drywall board (walls) located within Office #2	None detected
CA – 43	66	Diesel Shop	12" x 12" vinyl floor tile (white) located within the Girl's Washroom	None detected
CA – 43A	-	Diesel Shop	12" x 12" vinyl floor tile (white) located within the Girl's Washroom	None detected
CA – 43B	-	Diesel Shop	12" x 12" vinyl floor tile (white) located within the Girl's Washroom	None detected
CA – 44	67	Diesel Shop	Ceiling plaster located within Room B-1 (basement level)	None detected
CA – 44A	-	Diesel Shop	Ceiling plaster located within Room B-1 (basement level)	None detected
CA – 44B	-	Diesel Shop	Ceiling plaster located within Room B-1 (basement level)	None detected
CA – 45	68	Diesel Shop	Pipe insulation (aircell) located on "old" heating lines in Room B-2 (basement level)	70% Chrysotile
CA – 45A	-	Diesel Shop	Pipe insulation (aircell) located on "old" heating lines in Room B-2 (basement level)	Stop Positive
CA – 45B	-	Diesel Shop	Pipe insulation (aircell) located on "old" heating lines in Room B-2 (basement level)	Stop Positive
CA – 46	69	Diesel Shop	Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 (basement level)	Trace
CA – 46A	-	Diesel Shop	Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 (basement level)	Trace
CA – 46B	-	Diesel Shop	Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 (basement level)	0.5% Chrysotile

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 47	70	Diesel Shop	"Transite" panel on man door in Room B-3 (basement level)	40% Chrysotile
CA – 47A	-	Diesel Shop	"Transite" panel on man door in Room B-3 (basement level)	Stop Positive
CA – 47B	-	Diesel Shop	"Transite" panel on man door in Room B-3 (basement level)	Stop Positive
CA – 48	71	Diesel Shop	Pipe insulation (mag block) located old steam heating lines in Room B-3 (basement level)	1% Chrysotile 4% Amosite
CA – 48A	-	Diesel Shop	Pipe insulation (mag block) located old steam heating lines in Room B-3 (basement level)	Stop Positive
CA – 48B	-	Diesel Shop	Pipe insulation (mag block) located old steam heating lines in Room B-3 (basement level)	Stop Positive
CA – 49	72	Diesel Shop	Elbow/fitting insulation on heating & domestic piperuns in Room B-3 (basement level)	50% Chrysotile
CA – 49A	-	Diesel Shop	Elbow/fitting insulation on heating & domestic piperuns in Room B-3 (basement level)	Stop Positive
CA – 49B	-	Diesel Shop	Elbow/fitting insulation on heating & domestic piperuns in Room B-3 (basement level)	Stop Positive
CA – 50	73	Yard Office	Exterior wall caulking (white)	None detected
CA – 50A	-	Yard Office	Exterior wall caulking (white)	None detected
CA – 50B	-	Yard Office	Exterior wall caulking (white)	None detected
CA – 51	74	Yard Office	Exterior window and door caulking (grey)	None detected
CA – 51A	-	Yard Office	Exterior window and door caulking (grey)	None detected
CA – 51B	-	Yard Office	Exterior window and door caulking (grey)	None detected
CA – 52	75	Yard Office	Drywall joint compound (mud) located within Hallway #1	None detected
CA – 52A	-	Yard Office	Drywall joint compound (mud) located within Hallway #1	None detected
CA – 52B	-	Yard Office	Drywall joint compound (mud) located within Hallway #1	None detected

Sample No.	Photo No. (Appendix 'A')	Location	Material	Asbestos Content
CA – 53	76	Yard Office	2' x 2' drop ceiling tile located within the Office Section	None detected
CA – 53A	-	Yard Office	2' x 2' drop ceiling tile located within the Office Section	None detected
CA – 53B	-	Yard Office	2' x 2' drop ceiling tile located within the Office Section	None detected
CA – 54	77	Yard Office	Roll vinyl flooring (beige) located within the Office Section	None detected
CA – 54A	-	Yard Office	Roll vinyl flooring (beige) located within the Office Section	None detected
CA – 54B	-	Yard Office	Roll vinyl flooring (beige) located within the Office Section	None detected
CA – 55	78	Yard Office	Elbow/fitting insulation located on piperuns within the Office Section	None detected
CA – 55A	-	Yard Office	Elbow/fitting insulation located on piperuns within the Office Section	None detected
CA – 55B	-	Yard Office	Elbow/fitting insulation located on piperuns within the Office Section	None detected
CA – 56	79	Yard Office	12" x 12" vinyl floor tile (grey) located within the Signals Store Section	None detected
CA – 56A	-	Yard Office	12" x 12" vinyl floor tile (grey) located within the Signals Store Section	None detected
CA – 56B	-	Yard Office	12" x 12" vinyl floor tile (grey) located within the Signals Store Section	None detected
CA – 57	80	Yard Office	2' x 4' drop ceiling tile located within the Signals Store Section	None detected
CA – 57A	-	Yard Office	2' x 4' drop ceiling tile located within the Signals Store Section	None detected
CA – 57B	-	Yard Office	2' x 4' drop ceiling tile located within the Signals Store Section	None detected
CA – 58	81	Yard Office	2' x 4' drop ceiling tile (fine) located within the Signals Store Section	None detected
CA – 58A	-	Yard Office	2' x 4' drop ceiling tile (fine) located within the Signals Store Section	None detected
CA – 58B	-	Yard Office	2' x 4' drop ceiling tile (fine) located within the Signals Store Section	None detected

4.1 Asbestos Findings

Based on our site assessment and laboratory results, the following asbestos findings are presented in Table 2 (below) with a further detailed "Building by Building DSS Findings" table of our findings presented in Appendix 'D'.

Table 2
Summary of Asbestos Findings

Building	Asbestos Findings
Watering Shack #1	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Timber foundation. • Exterior walls are wood. • Tar roofing shingles are not asbestos. • No caulking observed. • Wall and ceiling insulation is fiberglass (non-asbestos). • Interior wood floor, walls and ceiling. • No other building materials found or suspected to contain asbestos.
Watering Shack #2	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Timber foundation. • Exterior walls and roofing are metal clad. • Door and window caulking (white) is new and not suspected to contain asbestos. • Wall and ceiling insulation is fiberglass (non-asbestos). • Interior wood floor, walls and ceiling. • No other building materials found or suspected to contain asbestos.
Coach Cleaner Storage Shed	<ul style="list-style-type: none"> • All exterior caulking (white) (non-friable) located at wall and metal roof seams is asbestos-containing. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • Interior concrete floor and wood walls and ceiling. • No other building materials found or suspected to contain asbestos.
Coach Shop	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • All wall, door and window caulking observed is not asbestos. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • All pipes and ductwork insulation is fiberglass (non-asbestos). • All vinyl floor tiles observed are not asbestos. • New welded vinyl flooring in washrooms is not suspected to contain asbestos. • No other building materials found or suspected to contain asbestos.
Wheel Drop Pit Shelter	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • No caulking observed. • Spray foam on interior walls is new and is not suspected to contain asbestos. • All pipe insulation observed is fiberglass (non-asbestos). • Interior concrete floor and metal clad walls and ceiling. • No other building materials found or suspected to contain asbestos.

Stores	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • No caulking observed. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • All pipe insulation observed is fiberglass (non-asbestos). • Interior concrete floor and metal clad walls and ceiling. • No other building materials found or suspected to contain asbestos.
Locomotive Sanding Tower	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete foundation. • Tower and holding tank structures are metal / steel. • No caulking observed. • All pipes observed are bare (not insulated). • No other building materials found or suspected to contain asbestos.
Power House	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior brick walls. • PVC roofing. • All caulking observed is not asbestos. • All exterior brick mortar is not asbestos. • All interior ceramic wall tile mortar is not asbestos. • All wall insulation observed is fiberglass (non-asbestos). • All pipes observed are bare or insulation in black foam (non-asbestos). • All rain leaders observed are PVC (not insulated). • Interior ceramic flooring and walls. • Metal pan ceiling. • No other building materials found or suspected to contain asbestos.
Scale Building	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior wood siding. • Metal roofing. • All observed caulking is not asbestos. • All observed roll tar sheeting located over exterior weight scale deck is not asbestos. • New vinyl windows. • All observed wall and ceiling insulation is fiberglass (non-asbestos). • No other building materials found or suspected to contain asbestos.
Tool Shed	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Timber foundation. • Exterior walls are wood. • Tar roofing shingles are not asbestos. • No caulking observed. • No insulation observed. • Interior wood floor, walls and ceiling. • No other building materials found or suspected to contain asbestos.

Storage Shed #1	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Timber foundation. • Exterior walls are wood. • Tar roofing shingles are not asbestos. • No caulking observed. • No insulation observed. • Interior wood floor, walls and ceiling. • No other building materials found or suspected to contain asbestos.
MOW Storage Shed	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Timber foundation. • Exterior walls metal clad. • Tar roofing shingles are not asbestos. • No caulking observed. • No insulation observed. • Interior wood floor, walls and ceiling. • No other building materials found or suspected to contain asbestos.
Rip Track Fuel Shed	<ul style="list-style-type: none"> • All window glazing (white) (non-friable) is asbestos-containing. • Concrete slab on-grade. • Exterior walls are wood. • Tar roofing shingles are not asbestos. • No caulking observed. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • Interior wood walls and ceiling. • No other building materials found or suspected to contain asbestos.
Rip Track Building	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior walls are wood. • Tar roofing shingles are not asbestos. • Exterior door caulking is not asbestos. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • Interior wood walls and ceiling. • No other building materials found or suspected to contain asbestos.
Repair Track Equipment Shed (2 Sea Cans)	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Exterior walls, roof and base are metal (2 - 20' sea can). • Interior wood floor. • Interior metal and wood walls. • Interior metal and wood ceilings. • No caulking observed. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • No other building materials found or suspected to contain asbestos.

<p>Coach Sewer Dump Storage Shed</p>	<ul style="list-style-type: none"> • All exterior caulking (white) (non-friable) used on wall and soffit electrical penetrations as well as the door is asbestos-containing. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • Interior walls and ceiling are metal clad. • All pipes observed are bare (not insulated). • No other building materials found or suspected to contain asbestos.
<p>Freight Shed</p>	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade in loading bay. • Concrete foundation in office section. • Exterior walls and roofing are metal clad in loading bay. • Exterior brick walls and metal clad roofing in office section. • All exterior scratch coat located on concrete foundation walls is not asbestos. • All window and door caulking observed is new (silicone) and not suspected. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • All pipes and ductwork observed are bare (not insulated). • Interior wood walls within the loading bay. • All drywall board and joint compound (mud) within the office section is not asbestos. • All scratch coat observed on interior concrete walls within basement of the office section is not asbestos. • All 2' x 4' drop ceiling tiles observed within the office section are not asbestos • All interior flooring is either concrete, ceramic tile or new vinyl laminate and not suspected. • No other building materials found or suspected to contain asbestos.
<p>Locomotive Fueling Facility</p>	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade metal Quonset hut. • Exterior walls and roofing are metal clad. • Interior walls and ceiling are metal clad. • No insulation observed. • All pipes observed are bare (not insulated). • All caulking (silver) located around wall penetrations on the Quonset hut is not asbestos. • All caulking (black) located on the retaining wall system around the diesel tanks is not asbestos. • No other building materials found or suspected to contain asbestos.
<p>Green Shed</p>	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade. • Exterior walls and roofing are metal clad. • All exterior window caulking (clear) is not asbestos. • Interior walls and ceiling are metal clad. • Interior concrete floor. • No insulation observed. • No other building materials found or suspected to contain asbestos.

<p>MOW Water Shed</p>	<ul style="list-style-type: none"> • All interior "Transite" wall panels (grey) (non-friable) are asbestos-containing. • Timber foundation. • Exterior walls and roofing are metal clad. • No caulking observed. • Interior ceiling is metal pan. • Interior resin coated flooring (green) is not asbestos. • All wall and ceiling insulation observed is fiberglass (non-asbestos). • No other building materials found or suspected to contain asbestos.
<p>Diesel Shop</p>	<ul style="list-style-type: none"> • All pipe insulation (aircell) located on the "old" heating lines throughout the basement level of the Office Section and Main Shop area is asbestos-containing. • All pipe insulation (anti-sweat) located on domestic cold water lines throughout the basement level of the Office Section and Main Shop area is asbestos-containing. • All pipe insulation (mag block) located old steam heating lines throughout the basement level of the Office Section and Main Shop area is asbestos-containing. • All elbow/fitting insulation on both heating & domestic piperuns throughout the basement level of the Office Section and Main Shop area is asbestos-containing. • All "Transite" panels observed throughout the basement level of the Office Section and Main Shop area is asbestos-containing. • Built-up roofing system "suspected to contain asbestos" however not sampled due to potential damage to the roofing membrane. • Concrete slab on-grade in the main shop area. • Concrete foundation in office section. • All exterior walls are metal clad. • All exterior scratch coat located on concrete foundation walls is not asbestos. • All window, door and roof top HVAC unit caulking observed is not asbestos. • All insulation observed within the roof top HVAC unit is not asbestos. • All duct insulation observed within the Main Shop area is wood based and not suspected to contain asbestos. • All new heating pipe insulation is fiberglass (non-asbestos). • All wall and ceiling insulation observed is fiberglass (non-asbestos). • All drywall board and joint compound (mud) observed is not asbestos. • All 12" x 12' vinyl floor tiles including tile mastic is not asbestos. • All 2' x 4' drop ceiling tiles observed within the office section are not asbestos. • All 12" x 12" ceiling tiles located above the drop ceiling system within the office section are wood based and not suspected to contain asbestos. • All 12" x 12" ceiling tile mastic used within the office section is not asbestos. • All ceiling plaster within the basement level of the office section is not asbestos. • No other building materials found or suspected to contain asbestos.
<p>Yard Office</p>	<ul style="list-style-type: none"> • NO ASBESTOS-CONTAINING MATERIALS FOUND. • Concrete slab on-grade and concrete block foundation. • All exterior walls and roofing are metal clad. • All exterior window, door and metal cladding caulking observed is not asbestos. • All wall, ceiling, pipe and ductwork insulation observed is fiberglass (non-asbestos). • All drywall board and joint compound (mud) observed is not asbestos. • All drop ceiling tiles observed are not asbestos. • Elbow/fitting insulation on all observed piperuns is not asbestos. • All observed roll vinyl flooring and vinyl floor tiles including mastic is not asbestos. • No other building materials found or suspected to contain asbestos.

5.0 LEAD-CONTAINING BUILDING MATERIALS

The survey resulted in the retrieval of thirty-three (33) representative samples of paint observed on/in the twenty-four maintenance buildings 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 3 (below).

Table 3
Summary of Paint Sample Result

Sample No.	Photo No. (Appendix 'B')	Location	Sample Description	Lead Content (µg/g)
CL – 1	82	Coach Cleaner Storage Shed	Interior Wall & Ceiling Paint (surface colour = white)	36
CL – 2	83	Coach Shop	Wall Paint - Lunchroom (surface colour = light blue)	< 5
CL – 3	84	Coach Shop	Structural Steel Paint (surface colour = grey)	31
CL – 4	85	Coach Shop	Guard Rail Paint – Mezzanine (surface colour = yellow)	30
CL – 5	86	Wheel Drop Pit Shelter	Structural Steel Paint (surface colour = grey)	501
CL – 6	87	Stores	Structural Steel Paint (surface colour = grey)	7
CL – 7	88	Sanding Tower	Structural Steel Paint (surface colour = grey)	7
CL – 8	89	Scale Building	Exterior Wall Paint (surface colour = white)	< 5
CL – 9	90	Scale Building	Interior Wall Paint (surface colour = white)	< 5
CL – 10	91	Scale Building	Scale Paint (surface colour = silver)	22500
CL – 11	92	Tool Shed	Exterior Wall Paint (surface colour = blue)	26
CL – 12	93	Storage Shed #1	Exterior Wall Paint (surface colour = blue)	37
CL – 13	94	MOW Storage Shed	Exterior Door Paint (surface colour = blue)	< 5
CL – 14	95	Rip Track Fuel Shed	Exterior Wall Paint (surface colour = brown)	35
CL – 15	96	Rip Track Building	Exterior Wall Paint (surface colour = brown)	42

Sample No.	Photo No. (Appendix 'B')	Location	Sample Description	Lead Content (µg/g)
CL – 16	97	Rip Track Building	Interior Wall Paint (surface colour = grey)	< 5
CL – 17	98	Track Equipment Sheds (Sea Cans)	Exterior Wall & Roof Paint (surface colour = blue)	341
CL – 18	99	Freight Shed	Structural Steel Primer (surface colour = red)	289
CL – 19	100	Freight Shed	Interior Wall Paint – Loading Bay (surface colour = yellow)	18
CL – 20	101	Freight Shed	Basement Wall Paint (surface colour = grey)	419
CL – 21	102	Locomotive Fueling Facility	Steel Tank and Piping Paint (surface colour = white)	163
CL – 22	103	Diesel Shop	Wall Paint – Office #2 (surface colour = grey)	< 5
CL – 23	104	Diesel Shop	Wall Paint – Men's Washroom (surface colour = light grey)	< 5
CL – 24	105	Diesel Shop	Wall & Ceiling Paint – Room B-1 (surface colour = beige)	5800
CL – 25	106	Diesel Shop	Ceiling Paint – Room B-2 (surface colour = yellow)	5640
CL – 26	107	Diesel Shop	Wall & Ceiling Paint – Room B-3 (surface colour = dark green)	8100
CL – 27	108	Diesel Shop	Wall & Ceiling Paint – Room B-5 (surface colour = beige)	2070
CL – 28	109	Diesel Shop	Structural Steel Primer – Main Shop (surface colour = grey)	60000
CL – 29	110	Diesel Shop	Floor Paint – Main Shop (surface colour = yellow)	51600
CL – 30	111	Yard Office	Wall Paint – Office #1 (surface colour = white)	9
CL – 31	112	Yard Office	Wall Paint – Office #2 (surface colour = dark beige)	13
CL – 32	113	Yard Office	Wall Paint – Office #2 (surface colour = off white)	< 5
CL – 33	114	Yard Office	Wall Paint – Signals Store (surface colour = blue)	< 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
Low-level lead paints and surface coatings	Paint or surface coating containing less than or equal to 0.1% lead by dry weight (1000 µg/g, mg/kg, ppm).	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.
Lead-containing paints and surface coatings	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).	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.
Lead-based paints and surface coatings	Paint or surface coating containing equal to or greater than 0.5% lead by dry weight (5000 µg/g, mg/kg, ppm).	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.

5.2 Lead Paint Findings

Based on our site assessment and laboratory results, the following general lead findings are presented in Table 4 (below) with a further detailed “Building by Building DSS Findings” table of our findings presented in Appendix 'C'.

Table 4
Summary of Lead Findings

Building	Lead Findings
Watering Shack #2	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Coach Cleaner Storage Shed	<ul style="list-style-type: none"> Interior wall & ceiling paint (white) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Coach Shop	<ul style="list-style-type: none"> Wall paint (light blue) is classed as Low-level lead paint. Structural Steel Paint (grey) is classed as Low-level lead paint. Mezzanine Guard Rail Paint (yellow) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.

Wheel Drop Pit Shelter	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Stores	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Sanding Tower	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint.
Powerhouse	<ul style="list-style-type: none"> Lead batten strips on the exterior windows (see photo #115 in Appendix B) is classed as Lead-based material.
Scale Building	<ul style="list-style-type: none"> Exterior Wall Paint (white) is classed as Low-level lead paint. Interior Wall Paint (white) is classed as Low-level lead paint. Scale Paint (silver) is classed as Lead-containing paint.
Tool Shed	<ul style="list-style-type: none"> Exterior Wall Paint (blue) is classed as Low-level lead paint.
Storage Shed #1	<ul style="list-style-type: none"> Exterior Wall Paint (blue) is classed as Low-level lead paint.
MOW Storage Shed	<ul style="list-style-type: none"> Exterior Door Paint (blue) is classed as Low-level lead paint. Metal clad wall paint is a factory applied finish and are not “suspected” to contain lead based paint.
Rip Track Fuel Shed	<ul style="list-style-type: none"> Exterior Wall Paint (brown) is classed as Low-level lead paint.
Rip Track Building	<ul style="list-style-type: none"> Exterior Wall Paint (brown) is classed as Low-level lead paint. Interior Wall Paint (grey) is classed as Low-level lead paint.
Track Equipment Sheds (Sea Cans)	<ul style="list-style-type: none"> Exterior Wall and Roof Paint (blue) is classed as Low-level lead paint.
Coach Sewer Dump Storage Shed	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Freight Shed	<ul style="list-style-type: none"> Structural Steel Primer (red) is classed as Low-level lead paint. Interior Wall Paint (yellow) – Loading Bay is classed as Low-level lead paint. Basement Wall Paint (grey) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
Locomotive Fueling Facility	<ul style="list-style-type: none"> Fuel Tanks and Piping Paint (white) is classed as Low-level lead paint.
Green Shed	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.
MOW Water Shed	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.

Diesel Shop	<ul style="list-style-type: none"> • Lead batten strips on the exterior wall columns (see photo #116 in Appendix B) is classed as Lead-based material. • Wall Paint – Office #2 (grey) is classed as Low-level lead paint. • Wall Paint – Men's Washroom (light grey) is classed as Low-level lead paint. • Wall & Ceiling Paint – Room B-1 (beige) is classed as Lead Based paint. • Ceiling Paint – Room B-2 (yellow) is classed as Lead Based paint. • Wall & Ceiling Paint – Room B-3 (dark green) is classed as Lead Based paint. • Wall & Ceiling Paint – Room B-3 (beige) is classed as Lead-containing paint. • Structural Steel Primer – Main Shop (grey) is classed as Lead Based paint. • Floor Paint – Main Shop (yellow) is classed as Lead Based paint. • Metal clad wall paint is a factory applied finish and is not “suspected” to contain lead based paint.
Yard Office	<ul style="list-style-type: none"> • Wall Paint – Office #1 (white) is classed as Low-level lead paint. • Wall Paint – Office #2 (dark beige) is classed as Low-level lead paint. • Wall Paint – Office #2 (off white) is classed as Low-level lead paint. • Wall Paint – Signals Store (blue) is classed as Low-level lead paint. • Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint.

Should future activities (demolition/renovation) occur within any of the buildings noted above which would disturb the lead materials noted in this report, Thomas Contracting recommends that the affected material(s) be address prior to these activities. Demolition or renovation 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 Pipes / Solder

Although not sampled due to inflicting damage / leaks to the existing plumbing within Watering Shack #1 & #2, Coach Shop, Wheel Drop Pit Shelter, Stores, Powerhouse, Rip Track Building, Coach Sewer Dump Storage Shed, Freight Shed, Locomotive Fueling Facility, Diesel Shop and the Yard Office, it is Thomas Contracting opinion based on visual inspection that lead may also be present as a component in solder used on pipe fittings.

5.4 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 MERCURY

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 some manufacturing processes. The nervous system is very sensitive to all forms of mercury; however, vapour is especially harmful as it directly reaches the brain. Exposure to high levels of mercury may permanently damage the brain, kidneys and a developing fetus. Short-term exposure may cause lung damage, nausea, vomiting, skin rashes, and eye irritation.

6.1 Fluorescent Light Tubes Findings

Numerous fluorescent light tubes were observed within Watering Shack #2, Coach Cleaner Storage Shed, Coach Shop, Wheel Drop Pit Shelter, Powerhouse, Scale Building, Rip Track Building, Coach Sewer Dump Storage Shed, Freight Shed, MOW Water Shed, Diesel Shop and the Yard Office. All of which contain small amounts of mercury.

6.2 Thermostatic Control Switch Findings

Thomas Contracting observed the presence of numerous wall mounted thermostatic control switches under this DSS as follows.

Location	Manufacture	Sample #	Photo # (Appendix 'C')	Mercury Containing
Coach Shop (main shop area)	Emerson	CT-1	117	No
Coach Shop (office section)	Dimplex	CT-2	118	No
Scale Building	Dimplex	CT-3	119	No
Rip Track Building	Dimplex	CT-3	119	No
	STELPRO	CT-4	120	No
Freight Shed (loading bay)	Honeywell	CT-5	121	Yes
	White Rogers	CT-6	122	No
	Emerson	CT-7	123	No
Freight Shed (office section)	Capel	CT-8	124	No
	Honeywell	CT-9	125	Yes
MOW Water Shed	Honeywell	CT-10	126	No
	Dimplex	CT-11	126	No
Diesel Shop	Lennox	CT-12	127	No
	Honeywell	CT-13	128	Yes
	White Rogers	CT-14	129	No
Yard Office	Honeywell	CT-15	130	No
	White Rogers	CT-16	131	Yes
	Honeywell	CT-17	132	No

6.3 General Notes

Prior to any renovations or demolition activities that may disturb materials identified or suspected to contain mercury of any concentration, precautions must be taken to prevent mercury vapours from becoming airborne or liquid mercury contaminating the surrounding environment. Exposure to airborne mercury is regulated under the Revised Regulation of Ontario 844/90 as amended, Regulation respecting Mercury - made under the Occupational Health and Safety Act.

Mercury waste must be handled and disposed of according to the Revised Regulation of Ontario 347/90 as amended - made under the Environmental Protection Act, and may be subject to Leachate Criteria (Schedule 4) of this regulation. Therefore, it is our recommendation that prior to any demolition / renovation activity or if the fluorescent tubes will not be utilized in the future, the fluorescent tubes shall be disposed of properly or recycled by a licensed contractor.

7.0 POLYCHLORINATED BIPHENYLS (PCBS)

Although not a designated substance, the disposal of PCB's is regulated. Information labels on electrical equipment such as fluorescent light ballasts, transformers and capacitors for motors were examined to assist in determining PCB content. The data was compared against information available in the "Handbook on PCB's in Electrical Equipment" issued by Environment Canada, in order to determine PCB content of materials. No bulk sampling was performed at live PCB impregnated cables, or on dielectric fluids or materials on live ballasts, transformers or capacitors.

7.1 Fluorescent Light Ballast Findings

Thomas Contracting observed the presence of numerous fluorescent light ballasts under this DSS as follows. All of which are label marked as non-PCB containing.

Location	Ballast Manufacture / Type	Sample #	Photo # (Appendix 'C')	PCB Containing
Watering Shack #2	ACCUPRO / T8's	CB-1	133	Marked No PCB's
Coach Cleaner Storage Shed	ACCUPRO / T8's	CB-1	-	Marked No PCB's
Coach Shop	Sylvania / T8's	CB-2	134	Marked No PCB's
Wheel Drop Pit Shelter	Sylvania / T8's	CB-2	-	Marked No PCB's
Powerhouse	Sylvania / T8's	CB-2	-	Marked No PCB's
Scale Building	ACCUPRO / T8's	CB-1	-	Marked No PCB's
Rip Track Building	ACCUPRO / T8's	CB-1	-	Marked No PCB's
Coach Sewer Dump Storage Shed	ACCUPRO / T8's	CB-1	-	Marked No PCB's
Freight Shed	Sylvania / T8's	CB-3	135	Marked No PCB's
MOW Water Shed	ACCUPRO / T8's	CB-1	-	Marked No PCB's
Diesel Shop	Advance / T8's	CB-4	136	Marked No PCB's

Yard Office	ACCUPRO / T8's	CB-1	-	Marked No PCB's
	Sylvania / T8's	CB-2	-	Marked No PCB's
	Advance / T8's	CB-4	-	Marked No PCB's

7.2 Electrical Transformer Findings

Thomas Contracting observed the presence of numerous electrical transformers under this DSS as follows. All of which are "dry type" models and do not contain PCB's.

Location	Manufacture	Photo # (Appendix 'C')	PCB Containing
Coach Shop (mezzanine)	MARCUS	137 & 138	No PCB's "Dry Type"
Powerhouse (wall mount)	HPS Sentinel G	139 & 140	No PCB's "Dry Type"
Rip Track Fuel Shed	Unknown	141 & 142	No PCB's "Dry Type"
Locomotive Fueling Facility	BE	143 & 144	No PCB's "Dry Type"
MOW Water Shed	MARCUS	145 & 146	No PCB's "Dry Type"
Diesel Shop	MARCUS	147 & 148	No PCB's "Dry Type"
Yard Office	Square D	149 & 150	No PCB's "Dry Type"
	Federal Pioneer	151 & 152	No PCB's "Dry Type"

7.3 General Notes

Prior to any renovations or demolition activities which may disturb materials / equipment identified or suspected to contain PCB's of any concentration, precautions must be taken to prevent the PCB material from contaminating personal or the surrounding environment. Exposure handling and disposal of PCB material is regulated under the EPA's PCB Regulations –SOR/2008-273 and Regulation 362 - EPA, WASTE MANAGEMENT, PCBS - made under the Occupational Health and Safety Act and shall be conducted by a licensed contractor.

8.0 MOULD

No mould growth was identified under this DSS.

9.0 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 buildings. 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.

10.0 OTHER DESIGNATED SUBSTANCES

10.1 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.

10.2 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.

10.3 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.

10.4 Coke Oven Emissions

Not applicable for the surveyed site.

10.5 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.

10.6 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).

10.7 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.

11.0 SUMMARY

A designated substances survey of the ONTC – Cochrane Maintenance Buildings (24) located in Cochrane, Ontario, confirmed the presence of the following:

- Asbestos-containing exterior caulking (white) (non-friable) located at wall and metal roof seams of the Coach Cleaner Storage Shed.
- Asbestos-containing window glazing (white) (non-friable) located on the Rip Track Fuel Shed.
- Asbestos-containing exterior caulking (white) (non-friable) used on wall and soffit electrical penetrations as well as door of the Coach Sewer Dump Storage Shed.
- Asbestos-containing "Transite" wall panels (grey) (non-friable) located on the interior walls of the MOW Water Shed.
- Asbestos-containing pipe insulation (aircell) located on the "old" heating lines throughout the Office Section and Main Shop area of the Diesel Shop.
- Asbestos-containing pipe insulation (anti-sweat) located on the domestic cold water lines throughout the Office Section and Main Shop area of the Diesel Shop.

- Asbestos-containing pipe insulation (mag block) located the old steam heating lines throughout the Office Section and Main Shop area of the Diesel Shop.
- Asbestos-containing elbow/fitting insulation on both heating & domestic piperuns throughout the Office Section and Main Shop area of the Diesel Shop.
- Asbestos-containing "Transite" panels located throughout the Office Section and Main Shop area of the Diesel Shop.
- Diesel Shop built-up roofing system "suspected to contain asbestos" however not sampled due to potential damage to the roofing membrane.
- Lead batten strips located on the exterior windows of the Powerhouse as well as the exterior walls of the Diesel Shop.
- Lead-based wall & ceiling paint (beige / yellow / dark green) located within the office basement level of the Diesel Shop.
- Lead-based structural steel primer (grey) and floor paint (yellow) located within the main shop of the Diesel Shop.
- Lead-containing paint (silver) located on the steel scale within the basement area of the Scale Building.
- Lead-containing wall & ceiling paint (beige) located within the office basement level of the Diesel Shop.
- Lead materials "suspected" to be present as components in solder used in pipe fittings within Watering Shack #1 & #2, Coach Shop, Wheel Drop Pit Shelter, Stores, Powerhouse, Rip Track Building, Coach Sewer Dump Storage Shed, Freight Shed, Locomotive Fueling Facility, Diesel Shop and the Yard Office.
- Mercury in fluorescent light tubes present within Watering Shack #2, Coach Cleaner Storage Shed, Coach Shop, Wheel Drop Pit Shelter, Powerhouse, Scale Building, Rip Track Building, Coach Sewer Dump Storage Shed, Freight Shed, MOW Water Shed, Diesel Shop and the Yard Office.
- Mercury in wall mounted thermostatic control switches present within the Freight Shed (loading bay) - Honeywell switches, Freight Shed (office section) - Honeywell switches, Diesel Shop - Honeywell switches and the Yard Office – White Rogers switches.
- Possible silica in concrete, mortar, brick, masonry, ceramics, granite, slate, asphalt, etc.

12.0 RECOMMENDATIONS

12.1 Asbestos-containing Material (ACM's)

Based on our field observations, all asbestos-containing materials identified under this DSS assessment do not pose a health hazard in their present state. However, the removal and disposal of these materials 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.

12.2 Lead-containing Materials & Paints

Based on our observations, all lead-based paints, lead-containing paints, lead batten strips and "possible" lead containing pipe solder identified under this DSS assessment do not pose a health hazard in their present state. However, should removal and disposal of any lead containing paints and/or "possible" lead containing pipes be undertaken, work should be performed in accordance with applicable Federal and Provincial statutes as noted in our report and as outlined in "Lead Guideline for Construction, Renovation, Maintenance or Repair", issued in October 2014 by the Environmental Abatement Council of Ontario (EACO).

12.3 Mercury-containing Materials

Based on our observations, all mercury-containing fluorescent light tubes and wall mounted thermostatic control switches identified under this DSS assessment do not pose a health hazard in their present condition. All maintenance, removal and disposal of any mercury-containing materials must be performed in accordance with applicable Federal and Provincial statutes as noted in this report.

12.4 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 this report.

13.0 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.*
- *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.*
- *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.*
- *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.*

14.0 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***



CERTIFICATE OF ANALYSIS

Company Name:	Thomas Contracting	Report Date:	21-Jul-23
Company Contact:	Grant Johnson	Analysis Date:	19-Jul-23
Company Address:	212 A Birchgrove Dr. East, Callander, ON	Received Date:	17-Jul-23
Company Reference:	ONTC DSS Cochrane Site	LEX Job Number:	08232062
Sampling Date:	2023-06-29	No of Analysis:	170

Analysis Analysis of Bulk Materials for Asbestos by Polarized Light Microscopy (PLM)

Narrative The analysis was completed using a polarized light microscope. All sample collection is completed outside of LEX and is the sole responsibility of the client. Any deviation from the sampling requirements in the analytical method could prevent the interpretation of results as per the method and render the results invalid. Samples are disposed of 90 days following the delivery of the Certificate of Analysis.
LEX Scientific is ISO/IEC 17025: 2017 accredited by the National Voluntary Laboratory Accreditation Program for asbestos fibre analysis (NVLAP Lab code 101949-0).

Method The analysis was performed in accordance with the U.S. Environmental Protection Agency, App. E to Sub. E of 40 CFR Part 763 as well as EPA 600/R-93/116: Method for Determination of Asbestos in Bulk Building Materials, adopted in the Ontario Occupational Health and Safety Act, Ontario Regulation 278/05.

Notes ND = None Detected at the method detection limit.
PLM method detection limit = 0.1%
Trace = Less than 0.5% of the specified type of Fibrous Asbestos Content was detected in the sample.
ACM = Asbestos-Containing Material
MMVF = Man Made Vitreous Fibres such as Fibreglass, Mineral Wool, Rockwool and Glasswool.
Asbestos TremAct = A type of asbestos amphibole, termed Asbestos Tremolite / Actinolite.
Asbestos Anth = Anthophyllite. A type of asbestos amphibole


Laboratory Manager
German Leal

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291 Woodlawn Road West, Unit B-12, Guelph, Ontario, N1H 7L6

519-824-7082

e-mail: admin@lexscientific.com Website: www.lexscientific.com

Company: Thomas Contracting

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Client Sample / Description: CA-1 Tar roofing shingles (brown) located on Water Shack #1 LEX :1

Layer :1.1

Shingle (Homogenous, Resinous, Black/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-1A Tar roofing shingles (brown) located on Water Shack #1 LEX :2

Layer :2.1

Shingle (Homogenous, Resinous, Black/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-1B Tar roofing shingles (brown) located on Water Shack #1 LEX :3

Layer :3.1

Shingle (Homogenous, Resinous, Black/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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291 Woodlawn Road West, Unit B-12, Guelph, Ontario, N1H 7L6

519-824-7082

e-mail: admin@lexscientific.com Website: www.lexscientific.com

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Client Sample / Description: CA-2 Exterior caulking (white) located at wall and metal roof seams on the Coach Cleaner Storage Shed LEX :4

Layer :4.1 Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	3	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	97	%
Asbestos Detected:	Yes	ACM per Ontario Reg 278/05:	Yes		

Client Sample / Description: CA-2A Exterior caulking (white) located at wall and metal roof seams on the Coach Cleaner Storage Shed LEX :5

Layer :5.1 Caulking (Homogenous..) Sample Not Analyzed due to Positive Stop

Client Sample / Description: CA-2B Exterior caulking (white) located at wall and metal roof seams on the Coach Cleaner Storage Shed LEX :6

Layer :6.1 Caulking (Homogenous..) Sample Not Analyzed due to Positive Stop

Client Sample / Description: CA-3 Exterior door and wall patch caulking (white) located on the Coach Cleaner Storage Shed LEX :7

Layer :7.1 Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

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e-mail: admin@lexscientific.com Website: www.lexscientific.com

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Client Sample / Description: CA-3A Exterior door and wall patch caulking (white) LEX :8
located on the Coach Cleaner Storage Shed

Layer :8.1

Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-3B Exterior door and wall patch caulking (white) LEX :9
located on the Coach Cleaner Storage Shed

Layer :9.1

Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-4 2' x 4' drop ceiling tile located within the LEX :10
lunchroom of the Coach Shop

Layer :10.1

Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-4A 2' x 4' drop ceiling tile located within the lunchroom of the Coach Shop LEX :11

Layer :11.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-4B 2' x 4' drop ceiling tile located within the lunchroom of the Coach Shop LEX :12

Layer :12.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-5 12" x 12" vinyl floor tile (grey) located within the lunchroom of the Coach Shop LEX :13

Layer :13.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-5A 12" x 12" vinyl floor tile (grey) located within the lunchroom of the Coach Shop LEX :14

Layer :14.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-5B 12" x 12" vinyl floor tile (grey) located within the lunchroom of the Coach Shop LEX :15

Layer :15.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-6 Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase) of the Coach Shop LEX :16

Layer :16.1 Caulking (Homogenous, Rubbery, Beige)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-6A Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase) of the Coach Shop LEX :17

Layer :17.1 Caulking (Homogenous, Rubbery, Beige)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-6B Caulking (grey) used at wall and staircase seam within the janitor's room (under staircase) of the Coach Shop LEX :18

Layer :18.1 Caulking (Homogenous, Rubbery, Beige)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-7 Exterior window and door caulking (clear) located on the Coach Shop LEX :19

Layer :19.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-7A Exterior window and door caulking (clear) LEX :20
located on the Coach Shop

Layer :20.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-7B Exterior window and door caulking (clear) LEX :21
located on the Coach Shop

Layer :21.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-8 Exterior door caulking (white) located on the LEX :22
Power House

Layer :22.1 Caulking (Homogenous, Compact, Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	8	%
Asbestos TremAct:	0	%	NonFibrous:	92	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-8A Exterior door caulking (white) located on the Power House LEX :23

Layer :23.1 Caulking (Homogenous, Compact, Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	8	%
Asbestos TremAct:	0	%	NonFibrous:	92	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-8B Exterior door caulking (white) located on the Power House LEX :24

Layer :24.1 Caulking (Homogenous, Compact, Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	8	%
Asbestos TremAct:	0	%	NonFibrous:	92	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-9 Exterior window caulking (white) located on the Power House LEX :25

Layer :25.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-9A Exterior window caulking (white) located on the Power House LEX :26

Layer :26.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-9B Exterior window caulking (white) located on the Power House LEX :27

Layer :27.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-10 Exterior caulking (black) used at electrical cable wall penetrations on the Power House LEX :28

Layer :28.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-10A Exterior caulking (black) used at electrical cable wall penetrations on the Power House LEX :29

Layer :29.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-10B Exterior caulking (black) used at electrical cable wall penetrations on the Power House LEX :30

Layer :30.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-11 Exterior brick mortar (grey) located on the Power House LEX :31

Layer :31.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-11A Exterior brick mortar (grey) located on the Power House LEX :32

Layer :32.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-11B Exterior brick mortar (grey) located on the Power House LEX :33

Layer :33.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-12 Interior ceramic wall tile mortar (grey) located within the Power House LEX :34

Layer :34.1 Plaster (Homogenous, Compact, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-12A Interior ceramic wall tile mortar (grey) LEX :35
located within the Power House

Layer :35.1 Plaster (Homogenous, Coarse, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-12B Interior ceramic wall tile mortar (grey) LEX :36
located within the Power House

Layer :36.1 Plaster (Homogenous, Coarse, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-13 Exterior window and door caulking (white) LEX :37
located on the Scale Building

Layer :37.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-13A Exterior window and door caulking (white) LEX :38
located on the Scale Building

Layer :38.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-13B Exterior window and door caulking (white) LEX :39
located on the Scale Building

Layer :39.1 Caulking (Homogenous, Rubbery, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-14 Roll tar sheeting located over exterior LEX :40
weight scale deck of the Scale Building

Layer :40.1 Tar (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	7	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	93	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-14A Roll tar sheeting located over exterior weight scale deck of the Scale Building LEX :41

Layer :41.1 Tar (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	7	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	93	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-14B Roll tar sheeting located over exterior weight scale deck of the Scale Building LEX :42

Layer :42.1 Tar (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	7	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	93	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-15 Tar roofing shingles (black) located on the Tool Shed LEX :43

Layer :43.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-15A Tar roofing shingles (black) located on the Tool Shed LEX :44

Layer :44.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-15B Tar roofing shingles (black) located on the Tool Shed LEX :45

Layer :45.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-16 Tar roofing shingles (black) located on Storage Shed #1 LEX :46

Layer :46.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-16A Tar roofing shingles (black) located on Storage Shed #1 LEX :47

Layer :47.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-16B Tar roofing shingles (black) located on Storage Shed #1 LEX :48

Layer :48.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-17 Tar roofing shingles (green) located on the MOW Storage Shed LEX :49

Layer :49.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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e-mail: admin@lexscientific.com Website: www.lexscientific.com

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Client Sample / Description: CA-17A Tar roofing shingles (green) located on the MOW Storage Shed LEX :50

Layer :50.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	10	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	90	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-17B Tar roofing shingles (green) located on the MOW Storage Shed LEX :51

Layer :51.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	10	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	90	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-18 Tar roofing shingles (black) located on the Rip Track Fuel Shed LEX :52

Layer :52.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	10	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	90	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-18A Tar roofing shingles (black) located on the Rip Track Fuel Shed LEX :53

Layer :53.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-18B Tar roofing shingles (black) located on the Rip Track Fuel Shed LEX :54

Layer :54.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-19 Window glazing (white) located on the Rip Track Fuel Shed LEX :55

Layer :55.1 Caulking (Multilayer, Compact, White/Grey)

Asbestos Chrysotile:	Trace	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-19A Window glazing (white) located on the Rip Track Fuel Shed LEX :56

Layer :56.1 Caulking (Multilayer, Compact, White/Grey)

Asbestos Chrysotile:	0.5	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	99.5	%
Asbestos Detected:	Yes	ACM per Ontario Reg 278/05:	Yes		

Client Sample / Description: CA-19B Window glazing (white) located on the Rip Track Fuel Shed LEX :57

Layer :57.1 Caulking (Multilayer,.) Sample Not Analyzed due to Positive Stop

Client Sample / Description: CA-20 Tar roofing shingles (grey) located on the Rip Track Shed LEX :58

Layer :58.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

Client Sample / Description: CA-20A Tar roofing shingles (grey) located on the Rip Track Shed LEX :59

Layer :59.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

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Client Sample / Description: CA-20B Tar roofing shingles (grey) located on the Rip Track Shed LEX :60

Layer :60.1 Shingle (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	15	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	85	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-21 Exterior door caulking (brown) located on the Rip Track Shed LEX :61

Layer :61.1 Caulking (Homogenous, Rubbery, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-21A Exterior door caulking (brown) located on the Rip Track Shed LEX :62

Layer :62.1 Caulking (Homogenous, Rubbery, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-21B Exterior door caulking (brown) located on the Rip Track Shed LEX :63

Layer :63.1 Caulking (Homogenous, Rubbery, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-22 Exterior door and well penetrations caulking (white) located on the Coach Storage Dump Storage Shed LEX :64

Layer :64.1 Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	Trace	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-22A Exterior door and well penetrations caulking (white) located on the Coach Storage Dump Storage Shed LEX :65

Layer :65.1 Caulking (Homogenous, Rubbery, White/Grey)

Asbestos Chrysotile:	0.5	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	99.5	%
Asbestos Detected:	Yes		ACM per Ontario Reg 278/05:	Yes	

Client Sample / Description: CA-22B Exterior door and well penetrations caulking (white) located on the Coach Storage Dump Storage Shed LEX :66

Layer :66.1 Caulking (Homogenous,.) Sample Not Analyzed due to Positive Stop

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Client Sample / Description: CA-23 Drywall joint compound (mud) located on the Office walls within the Freight Shed LEX :67

Layer :67.1 Joint Compound (Homogenous, Fine, Off-White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-23A Drywall joint compound (mud) located on the Office walls within the Freight Shed LEX :68

Layer :68.1 Joint Compound (Homogenous, Fine, Off-White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-23B Drywall joint compound (mud) located on the Office walls within the Freight Shed LEX :69

Layer :69.1 Joint Compound (Homogenous, Fine, Off-White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-24 Drywall board located on Office walls within the Freight Shed LEX :70

Layer :70.1

Drywall Board (Multilayer, Compact, Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	1	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	99	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-24A Drywall board located on Office walls within the Freight Shed LEX :71

Layer :71.1

Joint Compound (Homogenous, Fine, Off-White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :71.2

Drywall Board (Multilayer, Compact, Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	1	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	99	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-24B Drywall board located on Office walls within the Freight Shed LEX :72

Layer :72.1

Drywall (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-25 Scratch coat on concrete walls within basement area of the Freight Shed LEX :73

Layer :73.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

Client Sample / Description: CA-25A Scratch coat on concrete walls within basement area of the Freight Shed LEX :74

Layer :74.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

Client Sample / Description: CA-25B Scratch coat on concrete walls within basement area of the Freight Shed LEX :75

Layer :75.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

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Client Sample / Description: CA-26 2' x 4' drop ceiling tile located within the basement office of the Freight Shed LEX:76

Layer :76.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-26A 2' x 4' drop ceiling tile located within the basement office of the Freight Shed LEX:77

Layer :77.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-26B 2' x 4' drop ceiling tile located within the basement office of the Freight Shed LEX:78

Layer :78.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-27 Exterior scratch coat on concrete foundation walls of the Freight Shed LEX :79

Layer :79.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-27A Exterior scratch coat on concrete foundation walls of the Freight Shed LEX :80

Layer :80.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-27B Exterior scratch coat on concrete foundation walls of the Freight Shed LEX :81

Layer :81.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-28 2' x 4' drop ceiling tile located within the main floor office area of the Freight Shed LEX :82

Layer :82.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	4	%
Asbestos TremAct:	0	%	NonFibrous:	16	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-28A 2' x 4' drop ceiling tile located within the main floor office area of the Freight Shed LEX :83

Layer :83.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	4	%
Asbestos TremAct:	0	%	NonFibrous:	16	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-28B 2' x 4' drop ceiling tile located within the main floor office area of the Freight Shed LEX :84

Layer :84.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	4	%
Asbestos TremAct:	0	%	NonFibrous:	16	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-29 Caulking (black) located on the Locomotive Fueling Facility retaining wall around the diesel tanks LEX :85

Layer :85.1 Caulking (Homogenous, Rubbery, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :85.2 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	2	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-29A Caulking (black) located on the Locomotive Fueling Facility retaining wall around the diesel tanks LEX :86

Layer :86.1 Caulking (Homogenous, Rubbery, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :86.2 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	2	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-29B Caulking (black) located on the Locomotive Fueling Facility retaining wall around the diesel tanks LEX :87

Layer :87.1 Caulking (Homogenous, Rubbery, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :87.2 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	2	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-30 Caulking (silver) located around wall penetrations on the Locomotive Fueling Facility - Quonset Hut building. LEX :88

Layer :88.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-30A Caulking (silver) located around wall penetrations on the Locomotive Fueling Facility - Quonset Hut building. LEX :89

Layer :89.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-30B Caulking (silver) located around wall penetrations on the Locomotive Fueling Facility - Quonset Hut building. LEX :90

Layer :90.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-31 Exterior window caulking (clear) located on the Green Shed. LEX :91

Layer :91.1 Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-31A Exterior window caulking (clear) located on the Green Shed. LEX :92

Layer :92.1

Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-31B Exterior window caulking (clear) located on the Green Shed. LEX :93

Layer :93.1

Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-32 Resin coating flooring (green) located within the MOW Water Shed LEX :94

Layer :94.1

Flooring (Homogenous, Hard, Green)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-32A Resin coating flooring (green) located within the MOW Water Shed LEX :95

Layer :95.1 Flooring (Homogenous, Hard, Green)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

Client Sample / Description: CA-32B Resin coating flooring (green) located within the MOW Water Shed LEX :96

Layer :96.1 Flooring (Homogenous, Hard, Green)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No	ACM per Ontario Reg 278/05:	No		

Client Sample / Description: CA-33 Interior "Transite" wall panels located within the MOW Storage Shed LEX :97

Layer :97.1 Transite (Homogenous, Hard, Grey)

Asbestos Chrysotile:	40	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	60	%
Asbestos Detected:	Yes	ACM per Ontario Reg 278/05:	Yes		

Client Sample / Description: CA-33A Interior "Transite" wall panels located within the MOW Storage Shed LEX :98

Layer :98.1 Transite (Homogenous,) Sample Not Analyzed due to Positive Stop

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Client Sample / Description: CA-33B Interior "Transite" wall panels located within the MOW Storage Shed LEX :99

Layer :99.1 Transite (Homogenous,) Sample Not Analyzed due to Positive Stop

Client Sample / Description: CA-34 Scratch coat located on exterior foundation walls of the Diesel Shop LEX :100

Layer :100.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-34A Scratch coat located on exterior foundation walls of the Diesel Shop LEX :101

Layer :101.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-34B Scratch coat located on exterior foundation walls of the Diesel Shop LEX :102

Layer :102.1 Plaster (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-35 Caulking (brown) used on roop top HVAC unit located on the Diesel Shop. LEX :103

Layer :103.1 Caulking (Homogenous, Rubbery, Dark Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-35A Caulking (brown) used on roop top HVAC unit located on the Diesel Shop. LEX :104

Layer :104.1 Caulking (Homogenous, Rubbery, Dark Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-35B Caulking (brown) used on roop top HVAC unit located on the Diesel Shop. LEX :105

Layer :105.1 Caulking (Homogenous, Rubbery, Dark Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-36 Interior wall and ceiling insulation used within the roof top HVAC unit located on the Diesel Shop. LEX :106

Layer :106.1 Insulation (Homogenous, Fibrous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	25	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	75	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-36A Interior wall and ceiling insulation used within the roof top HVAC unit located on the Diesel Shop. LEX :107

Layer :107.1 Insulation (Homogenous, Fibrous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	25	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	75	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-36B Interior wall and ceiling insulation used within the roof top HVAC unit located on the Diesel Shop. LEX :108

Layer :108.1 Insulation (Homogenous, Fibrous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	25	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	75	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-37 Exterior window and door caulking (clear) LEX :109
located on the Diesel Shop.

Layer :109.1 Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-37A Exterior window and door caulking (clear) LEX :110
located on the Diesel Shop.

Layer :110.1 Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-37B Exterior window and door caulking (clear) LEX :111
located on the Diesel Shop.

Layer :111.1 Caulking (Homogenous, Rubbery, Light Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-38 12" x 12" vinyl floor tile (grey) located within Office #1 of the Diesel Shop. LEX :112

Layer :112.1 *Floor Tile (Homogenous, Compact, Grey)*

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :112.2 *Floor Tile Mastic (Homogenous, Resinous, Black)*

Asbestos Chrysotile:	0	%	Cellulose:	1	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	1	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-38A 12" x 12" vinyl floor tile (grey) located within Office #1 of the Diesel Shop. LEX :113

Layer :113.1 *Floor Tile (Homogenous, Compact, Grey)*

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :113.2 *Floor Tile Mastic (Homogenous, Resinous, Black)*

Asbestos Chrysotile:	0	%	Cellulose:	3	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	1	%
Asbestos TremAct:	0	%	NonFibrous:	96	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-38B 12" x 12" vinyl floor tile (grey) located within Office #1 of the Diesel Shop. LEX :114

Layer :114.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Layer :114.2 Floor Tile Mastic (Homogenous, Resinous, Black)

Asbestos Chrysotile:	0	%	Cellulose:	3	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	1	%
Asbestos TremAct:	0	%	NonFibrous:	96	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-39 2' x 4' drop ceiling tile located within Office #1 of the Diesel Shop. LEX :115

Layer :115.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-39A 2' x 4' drop ceiling tile located within Office #1 of the Diesel Shop. LEX :116

Layer :116.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-39B 2' x 4' drop ceiling tile located within Office #1 of the Diesel Shop. LEX :117

Layer :117.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-40 Drywall joint compound (mud) located within Office #1 of the Diesel Shop. LEX :118

Layer :118.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-40A Drywall joint compound (mud) located within Office #1 of the Diesel Shop. LEX :119

Layer :119.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-40B Drywall joint compound (mud) located within Office #1 of the Diesel Shop. LEX :120

Layer :120.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-41 12" x 12" ceiling tile mastic (brown) located within Office #2 of the Diesel Shop. LEX :121

Layer :121.1 Mastic (Homogenous, Resinous, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	5	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	95	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-41A 12" x 12" ceiling tile mastic (brown) located within Office #2 of the Diesel Shop. LEX :122

Layer :122.1 Mastic (Homogenous, Resinous, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	5	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	95	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-41B 12" x 12" ceiling tile mastic (brown) located within Office #2 of the Diesel Shop. LEX :123

Layer :123.1 Mastic (Homogenous, Resinous, Brown)

Asbestos Chrysotile:	0	%	Cellulose:	5	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	95	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-42 Drywall board (walls) located within Office #2 of the Diesel Shop. LEX :124

Layer :124.1 Drywall Board (Multilayer, Compact, Light Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	2	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-42A Drywall board (walls) located within Office #2 of the Diesel Shop. LEX :125

Layer :125.1 Drywall Board (Multilayer, Compact, Light Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	2	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-42B Drywall board (walls) located within Office #2 of the Diesel Shop. LEX :126

Layer :126.1 Drywall Board (Multilayer, Compact, Light Grey/Brown)

Asbestos Chrysotile:	0	%	Cellulose:	2	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	98	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-43 12" x 12" vinyl floor tile (white) located within the Girl's Washroom of the Diesel Shop. LEX :127

Layer :127.1 Floor Tile (Homogenous, Compact, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-43A 12" x 12" vinyl floor tile (white) located within the Girl's Washroom of the Diesel Shop. LEX :128

Layer :128.1 Floor Tile (Homogenous, Compact, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-43B 12" x 12" vinyl floor tile (white) located within the Girl's Washroom of the Diesel Shop. LEX :129

Layer :129.1 Floor Tile (Homogenous, Compact, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-44 Ceiling plaster located in Room B-1 within the basement level of the Diesel Shop. LEX :130

Layer :130.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-44A Ceiling plaster located in Room B-1 within the basement level of the Diesel Shop. LEX :131

Layer :131.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-44B Ceiling plaster located in Room B-1 within the basement level of the Diesel Shop. LEX :132

Layer :132.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-45 Pipe insulation (aircell) locaetd on the "old" heating lines in Room B-2 within the basement level of the Diesel Shop. LEX :133

Layer :133.1 Fibrous (Homogenous, Fibrous, Grey)

Asbestos Chrysotile:	70	%	Cellulose:	25	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	5	%
Asbestos Detected:	Yes		ACM per Ontario Reg 278/05:	Yes	

Client Sample / Description: CA-45A Pipe insulation (aircell) locaetd on the "old" heating lines in Room B-2 within the basement level of the Diesel Shop. LEX :134

Layer :134.1 Fibrous (Homogenous..) Sample Not Analyzed due to Positive Stop

Client Sample / Description: CA-45B Pipe insulation (aircell) locaetd on the "old" heating lines in Room B-2 within the basement level of the Diesel Shop. LEX :135

Layer :135.1 Fibrous (Homogenous..) Sample Not Analyzed due to Positive Stop

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Client Sample / Description: CA-46 Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 within he basement level of the Diesel Shop. LEX :136

Layer :136.1 *Fibrous (Homogenous, Fibrous, Black)*

Asbestos Chrysotile:	Trace	%	Cellulose:	45	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

Layer :136.2 *Fibrous (Homogenous, Fibrous, Brown)*

Asbestos Chrysotile:	Trace	%	Cellulose:	90	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	10	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-46A Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 within he basement level of the Diesel Shop. LEX :137

Layer :137.1 *Fibrous (Homogenous, Fibrous, Black)*

Asbestos Chrysotile:	Trace	%	Cellulose:	45	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

Layer :137.2 *Fibrous (Homogenous, Fibrous, Brown)*

Asbestos Chrysotile:	Trace	%	Cellulose:	90	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	10	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-46B Pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 within he basement level of the Diesel Shop. **LEX :138**

Layer :138.1 *Fibrous (Homogenous, Fibrous, Black)*

Asbestos Chrysotile:	0.5	%	Cellulose:	45	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	54.5	%
Asbestos Detected:	Yes		ACM per Ontario Reg 278/05:	Yes	

Layer :138.2 *Fibrous (Homogenous, Fibrous, Brown)*

Asbestos Chrysotile:	Trace	%	Cellulose:	90	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	10	%
Asbestos Detected:	Trace		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-47 "Transite" panel on the main door in Room B-3 withint he basement level of the Diesel Shop. **LEX :139**

Layer :139.1 *Transite (Homogenous, Hard, Grey)*

Asbestos Chrysotile:	40	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	60	%
Asbestos Detected:	Yes		ACM per Ontario Reg 278/05:	Yes	

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Client Sample / Description: CA-48 Pipe insulation (mag block) located on old steam heating lines in Room B-3 within the basement level of the Diesel Shop. **LEX :140**

Layer :140.1 *Fibrous (Homogenous, Fibrous, White)*

Asbestos Chrysotile:	1	%	Cellulose:	0	%
Asbestos Amosite:	4	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	50	%
Asbestos Detected:	Yes	ACM per Ontario Reg 278/05:		Yes	

Client Sample / Description: CA-48A Pipe insulation (mag block) located on old steam heating lines in Room B-3 within the basement level of the Diesel Shop. **LEX :141**

Layer :141.1 *Fibrous (Homogenous..) Sample Not Analyzed due to Positive Stop*

Client Sample / Description: CA-48B Pipe insulation (mag block) located on old steam heating lines in Room B-3 within the basement level of the Diesel Shop. **LEX :142**

Layer :142.1 *Fibrous (Homogenous..) Sample Not Analyzed due to Positive Stop*

Client Sample / Description: CA-49 Elbow/fitting insulation on heating and domestic piperuns in Room B-3 within the basement level of the Diesel Shop. **LEX :143**

Layer :143.1 *Fibrous (Mix, Fibrous, Grey/Beige)*

Asbestos Chrysotile:	50	%	Cellulose:	5	%
Asbestos Amosite:	Trace	%	MMVF:	35	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	10	%
Asbestos Detected:	Yes	ACM per Ontario Reg 278/05:		Yes	

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Client Sample / Description: CA-49A Elbow/fitting insulation on heating and domestic piperuns in Room B-3 within the basement level of the Diesel Shop. LEX :144

Layer :144.1 *Fibrous (Mix,,) Sample Not Analyzed due to Positive Stop*

Client Sample / Description: CA-49B Elbow/fitting insulation on heating and domestic piperuns in Room B-3 within the basement level of the Diesel Shop. LEX :145

Layer :145.1 *Fibrous (Mix,,) Sample Not Analyzed due to Positive Stop*

Client Sample / Description: CA-50 Exterior wall caulking (grey) located on the Yard Office. LEX :146

Layer :146.1 *Caulking (Homogenous, Rubbery, Grey)*

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-50A Exterior wall caulking (grey) located on the Yard Office. LEX :147

Layer :147.1 *Caulking (Homogenous, Rubbery, Grey)*

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-50B Exterior wall caulking (grey) located on the Yard Office. LEX :148

Layer :148.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-51 Exterior window and door caulking (grey) located on the Yard Office. LEX :149

Layer :149.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-51A Exterior window and door caulking (grey) located on the Yard Office. LEX :150

Layer :150.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-51B Exterior window and door caulking (grey) located on the Yard Office. LEX :151

Layer :151.1 Caulking (Homogenous, Rubbery, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-52 Drywall joint compound (mud) located within Hallway #1 of the Yard Office. LEX :152

Layer :152.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-52A Drywall joint compound (mud) located within Hallway #1 of the Yard Office. LEX :153

Layer :153.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-52B Drywall joint compound (mud) located within Hallway #1 of the Yard Office. LEX :154

Layer :154.1 Joint Compound (Homogenous, Fine, White)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-53 2' x 2' drop ceiling tile located within the Office Section of the Yard Office. LEX :155

Layer :155.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	50	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	5	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-53A 2' x 2' drop ceiling tile located within the Office Section of the Yard Office. LEX :156

Layer :156.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	50	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	5	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-53B 2' x 2' drop ceiling tile located within the Office Section of the Yard Office. LEX:157

Layer :157.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	50	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	5	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-54 Roll vinyl flooring (beige) located within the Office Section of the Yard Office. LEX:158

Layer :158.1 Flooring (Multilayer, Flexible, Grey/Beige)

Asbestos Chrysotile:	0	%	Cellulose:	44	%
Asbestos Amosite:	0	%	MMVF:	1	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-54A Roll vinyl flooring (beige) located within the Office Section of the Yard Office. LEX:159

Layer :159.1 Flooring (Multilayer, Flexible, Grey/Beige)

Asbestos Chrysotile:	0	%	Cellulose:	44	%
Asbestos Amosite:	0	%	MMVF:	1	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-54B Roll vinyl flooring (beige) located within the Office Section of the Yard Office. LEX :160

Layer :160.1 Flooring (Multilayer, Flexible, Grey/Beige)

Asbestos Chrysotile:	0	%	Cellulose:	44	%
Asbestos Amosite:	0	%	MMVF:	1	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-55 Elbow/fitting insulation locaetd on the piperuns within the Office Section of the Yard Office. LEX :161

Layer :161.1 Fibrous (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-55A Elbow/fitting insulation locaetd on the piperuns within the Office Section of the Yard Office. LEX :162

Layer :162.1 Fibrous (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-55B Elbow/fitting insulation located on the piperuns within the Office Section of the Yard Office. LEX:163

Layer :163.1 Fibrous (Homogenous, Coarse, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	45	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	55	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-56 12" x 12" vinyl floor tile (grey) located within the Signals Store Section of the Yard Office. LEX:164

Layer :164.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-56A 12" x 12" vinyl floor tile (grey) located within the Signals Store Section of the Yard Office. LEX:165

Layer :165.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

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Client Sample / Description: CA-56B 12" x 12" vinyl floor tile (grey) located within the Signals Store Section of the Yard Office. LEX:166

Layer :166.1 Floor Tile (Homogenous, Compact, Grey)

Asbestos Chrysotile:	0	%	Cellulose:	0	%
Asbestos Amosite:	0	%	MMVF:	0	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	100	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-57 2' x 4' drop ceiling tile located within the Signals Store Section of the Yard Office. LEX:167

Layer :167.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-57A 2' x 4' drop ceiling tile located within the Signals Store Section of the Yard Office. LEX:168

Layer :168.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

This test report relates only to the items tested and must not be used to claim product endorsement by NVLAP or any agency of the United States government.
This report must not be reproduced, except in full, without the written consent of the laboratory

291 Woodlawn Road West, Unit B-12, Guelph, Ontario, N1H 7L6

519-824-7082

e-mail: admin@lexscientific.com Website: www.lexscientific.com

Company: Thomas Contracting Page 57 of 58 08232062

Client Sample / Description: CA-57B 2' x 4' drop ceiling tile located within the Signals Store Section of the Yard Office. LEX :169

Layer :169.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-58 2' x 4' drop ceiling tile (fine) located within the Signals Store Section of the Yard Office. LEX :170

Layer :170.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

Client Sample / Description: CA-58A 2' x 4' drop ceiling tile (fine) located within the Signals Store Section of the Yard Office. LEX :171

Layer :171.1 Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

This test report relates only to the items tested and must not be used to claim product endorsement by NVLAP or any agency of the United States government.
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291 Woodlawn Road West, Unit B-12, Guelph, Ontario, N1H 7L6

519-824-7082

e-mail: admin@lexscientific.com Website: www.lexscientific.com

Company: Thomas Contracting

Page 58 of 58

08232062

Client Sample / Description: CA-58B 2' x 4' drop ceiling tile (fine) located within the Signals Store Section of the Yard Office. LEX :172

Layer :172.1

Ceiling Tile (Homogenous, Fibrous, White/Grey)

Asbestos Chrysotile:	0	%	Cellulose:	40	%
Asbestos Amosite:	0	%	MMVF:	40	%
Asbestos Crocidolite:	0	%	OtherFibres:	0	%
Asbestos TremAct:	0	%	NonFibrous:	20	%
Asbestos Detected:	No		ACM per Ontario Reg 278/05:	No	

This test report relates only to the items tested and must not be used to claim product endorsement by NVLAP or any agency of the United States government.
 This report must not be reproduced, except in full, without the written consent of the laboratory

291 Woodlawn Road West, Unit B-12, Guelph, Ontario, N1H 7L6

519-824-7082

e-mail: admin@lexscientific.com Website: www.lexscientific.com



PHOTO # 1
Watering Shack #1 – Cochrane Site



PHOTO # 2
Watering Shack #2 – Cochrane Site



PHOTO # 3
Coach Cleaner Storage Shed – Cochrane Site



PHOTO # 4
Coach Shop – Cochrane Site



PHOTO # 5
Wheel Drop Pit Shelter – Cochrane Site



PHOTO # 6
Stores – Cochrane Site



PHOTO # 7
Locomotive Sanding Tower – Cochrane Site



PHOTO # 8
Powerhouse – Cochrane Site



PHOTO # 9
Scale Building – Cochrane Site



PHOTO # 10
Tool Shed – Cochrane Site



PHOTO # 11
Storage Shed #1 – Cochrane Site



PHOTO # 12
MOW Storage Shed – Cochrane Site



PHOTO # 13
Rip Track Fuel Shed – Cochrane Site



PHOTO # 14
Rip Track Building – Cochrane Site



PHOTO # 15
Outside Repair Track Equipment Shed (sea cans) – Cochrane Site



PHOTO # 16

Outside Repair Track Equipment Shed (sea cans) – Cochrane Site



PHOTO # 17

Coach Sewer Dump Storage Shed – Cochrane Site



PHOTO # 18
Freight Shed – Cochrane Site



PHOTO # 19
Locomotive Fueling Facility – Cochrane Site



PHOTO # 20
Green Shed – Cochrane Site



PHOTO # 21
MOW Water Shed – Cochrane Site



PHOTO # 22
Diesel Shop – Cochrane Site



PHOTO # 23
Yard Office – Cochrane Site



PHOTO # 24

Sample # CA – 1 : Non-asbestos tar roofing shingles (brown)
located on Watering Shack #1.



PHOTO # 25

Sample # CA – 2 : Asbestos-containing exterior caulking (white) located at wall and metal
roof seams of the Coach Cleaner Storage Shed. (3% chrysotile asbestos)



PHOTO # 26

Sample # CA – 3 : Non-asbestos exterior door and wall patch caulking (white)
located on the Coach Cleaner Storage Shed.

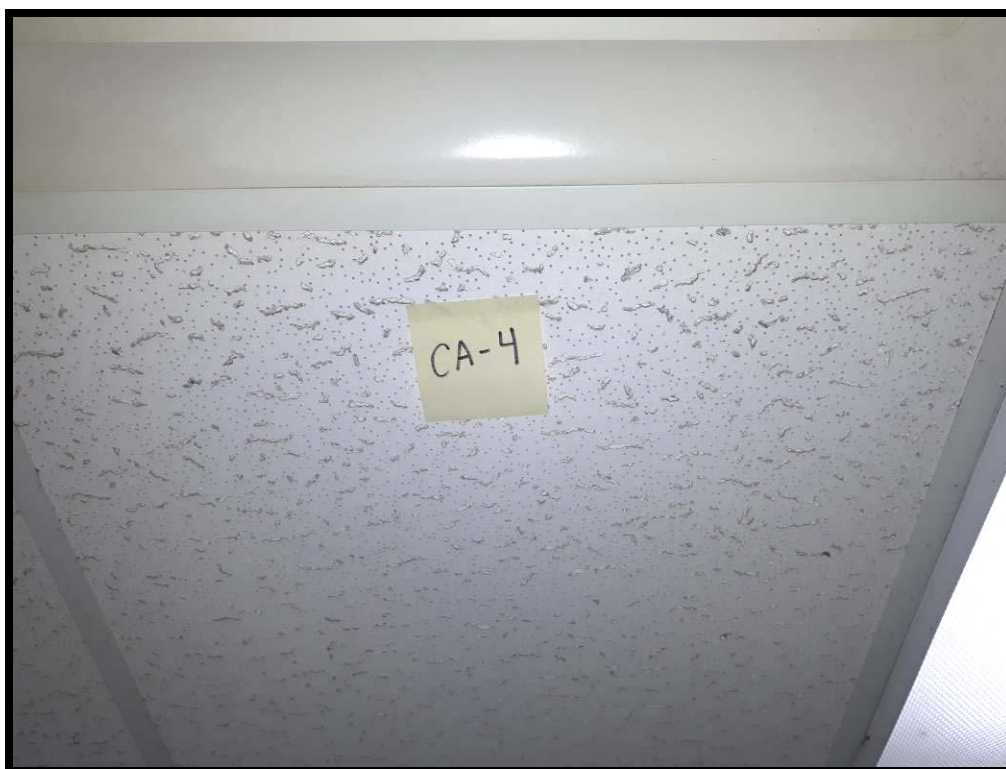


PHOTO # 27

Sample # CA – 4 : Non-asbestos 2' x 4' drop ceiling tile located within
the lunchroom of the Coach Shop.

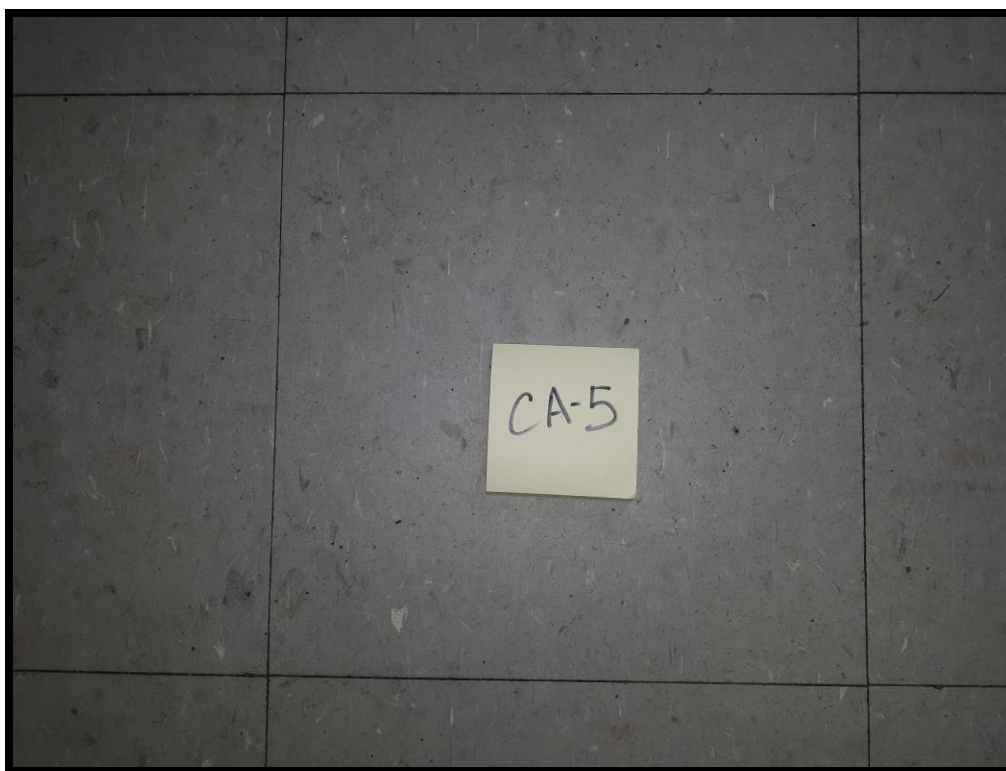


PHOTO # 28

Sample # CA – 5 : Non-asbestos 12" x 12" vinyl floor tile (grey) located within the lunchroom of the Coach Shop.

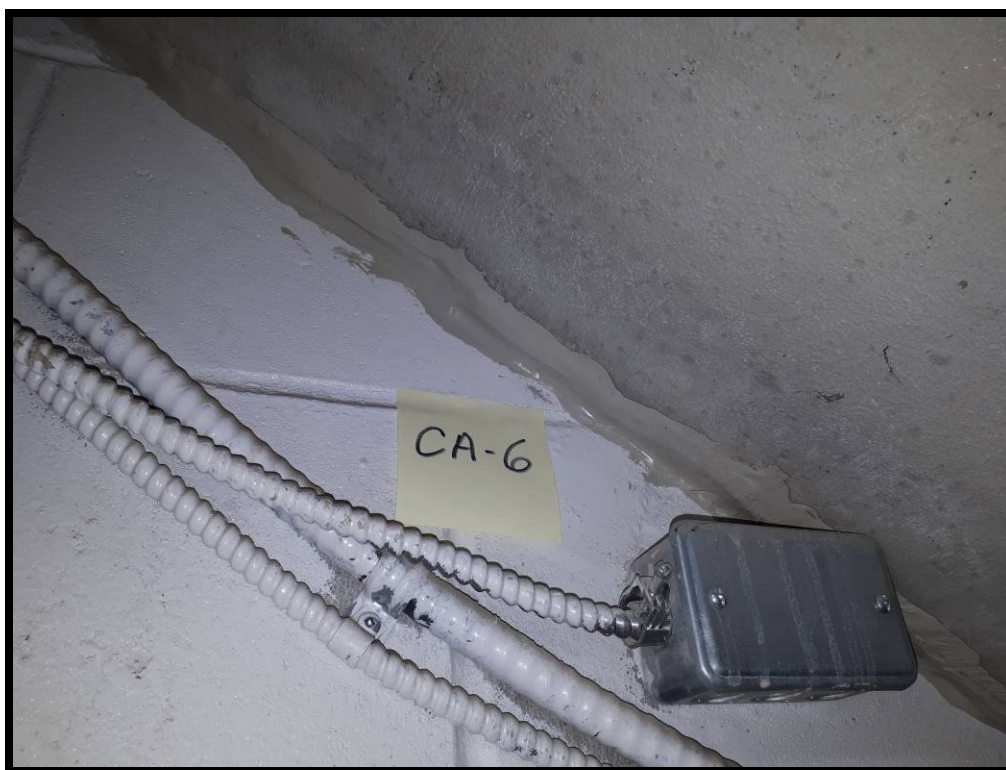


PHOTO # 29

Sample # CA – 6 : Non-asbestos caulking (grey) used at wall and staircase seam within the janitor's room (under staircase) of the Coach Shop.



PHOTO # 30

Sample # CA – 7 : Non-asbestos exterior window and door caulking (clear)
located on the Coach Shop.

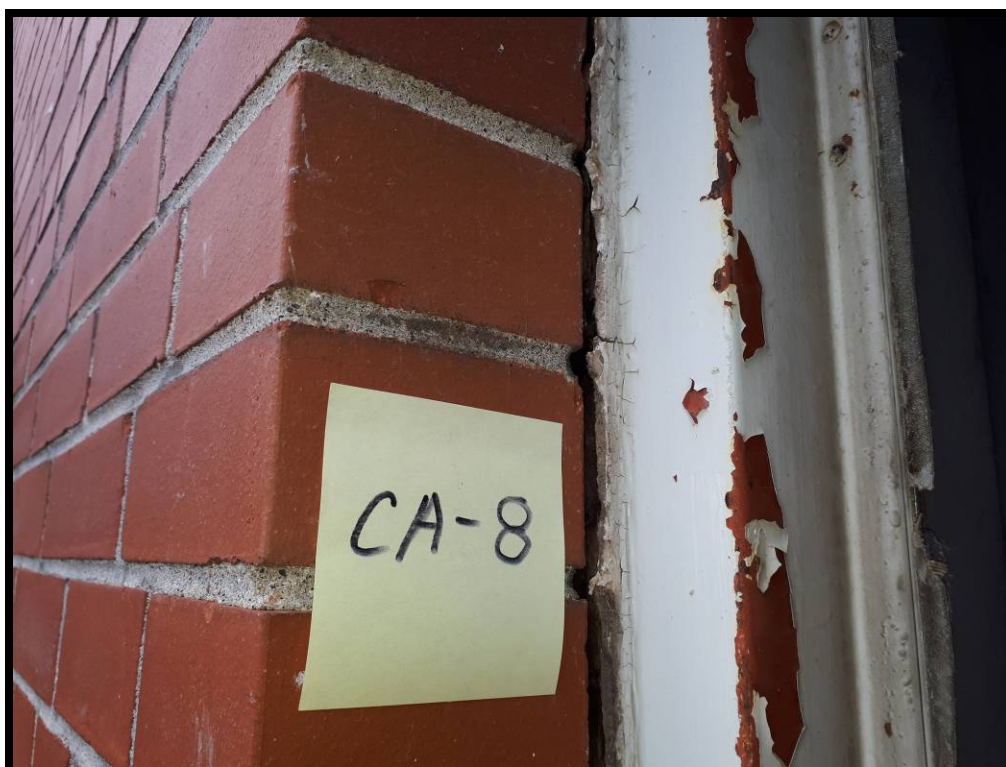


PHOTO # 31

Sample # CA – 8 : Non-asbestos exterior door caulking (white)
located on the Powerhouse.

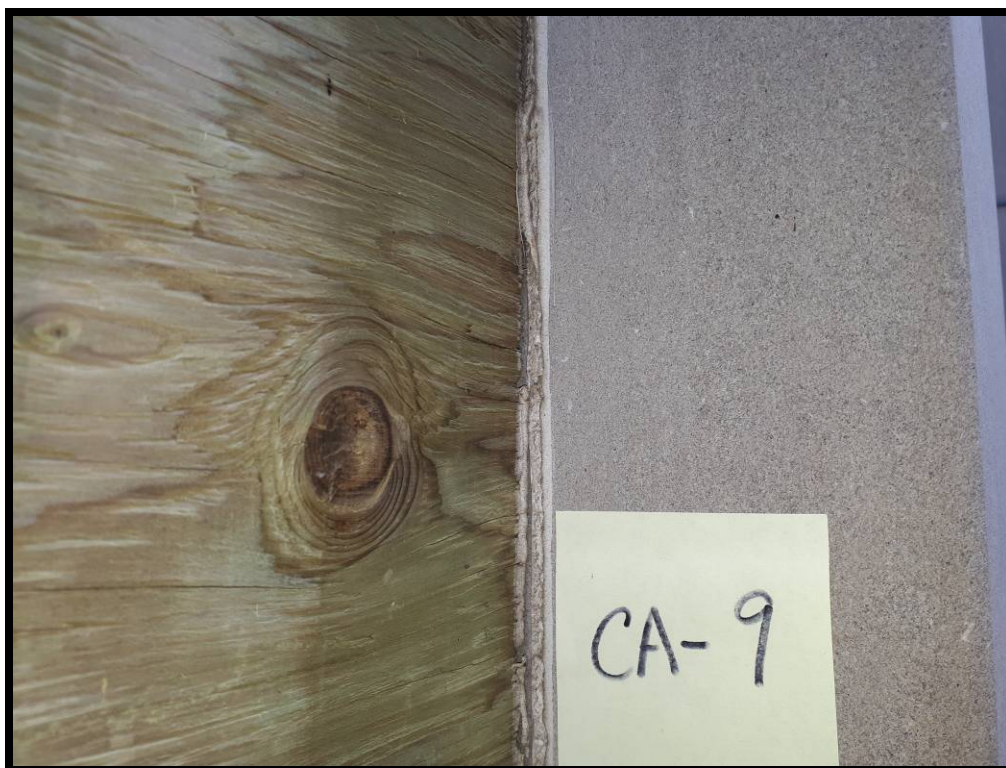


PHOTO # 32

Sample # CA – 9 : Non-asbestos exterior window caulking (white)
located on the Powerhouse.



PHOTO # 33

Sample # CA – 10 : Non-asbestos exterior caulking (black) used at
electrical cable wall penetrations located on the Powerhouse.

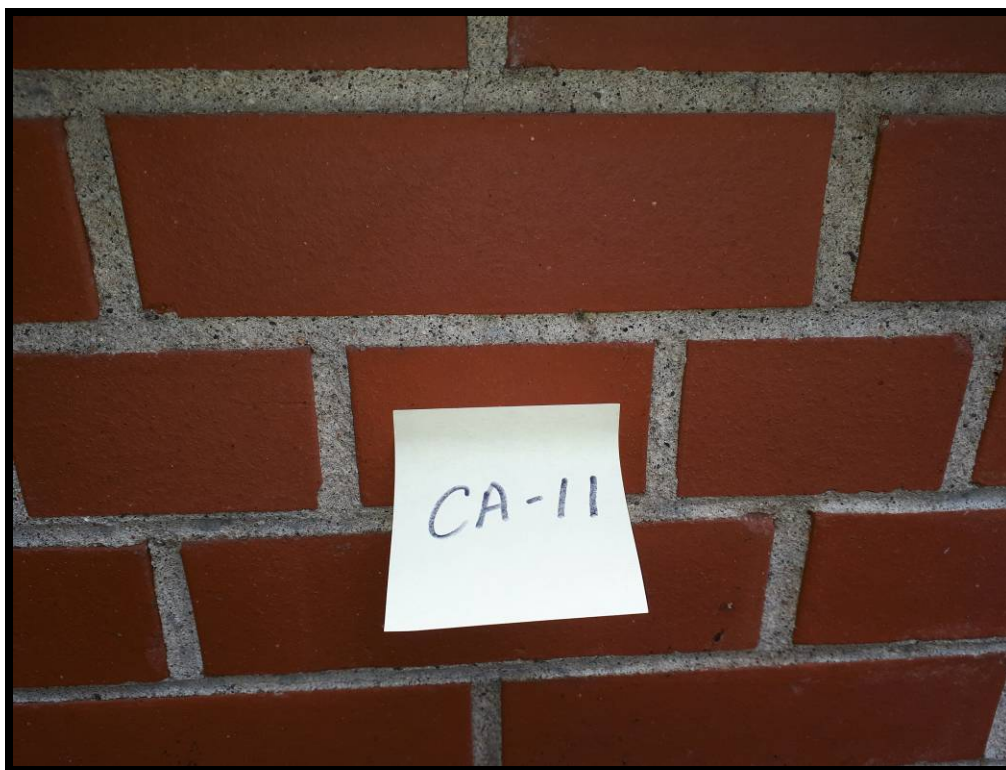


PHOTO # 34

Sample # CA – 11 : Non-asbestos exterior brick mortar (grey)
located on the Powerhouse.

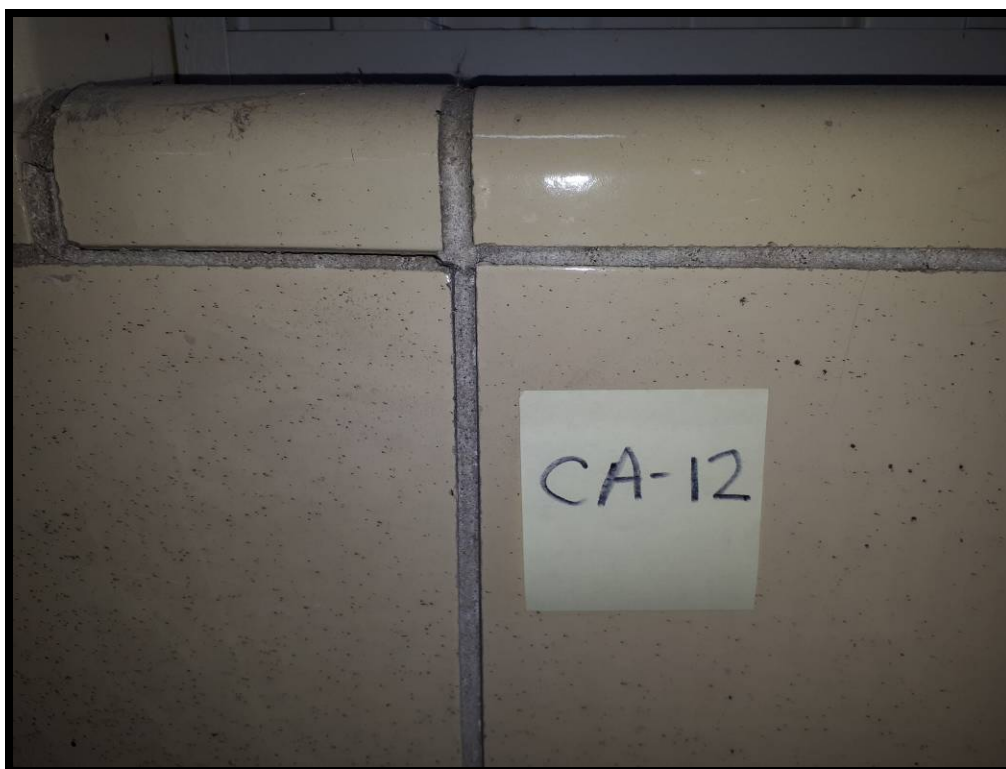


PHOTO # 35

Sample # CA – 12 : Non-asbestos interior ceramic wall tile mortar (grey)
located on the Powerhouse.



PHOTO # 36

Sample # CA – 13 : Non-asbestos exterior window and door caulking (white) located on the Scale Building.



PHOTO # 37

Sample # CA – 14 : Non-asbestos roll tar sheeting (black) located over exterior weight scale deck of the Scale Building.



PHOTO # 38

Sample # CA – 15 : Non-asbestos tar roofing shingles (black)
located on the Tool Shed.



PHOTO # 39

Sample # CA – 16 : Non-asbestos tar roofing shingles (black)
located on the Storage Shed #1.



PHOTO # 40

*Sample # CA – 17 : Non-asbestos tar roofing shingles (green)
located on the MOW Storage Shed.*



PHOTO # 41

*Sample # CA – 18 : Non-asbestos tar roofing shingles (black)
located on the Rip Track Fuel Shed.*

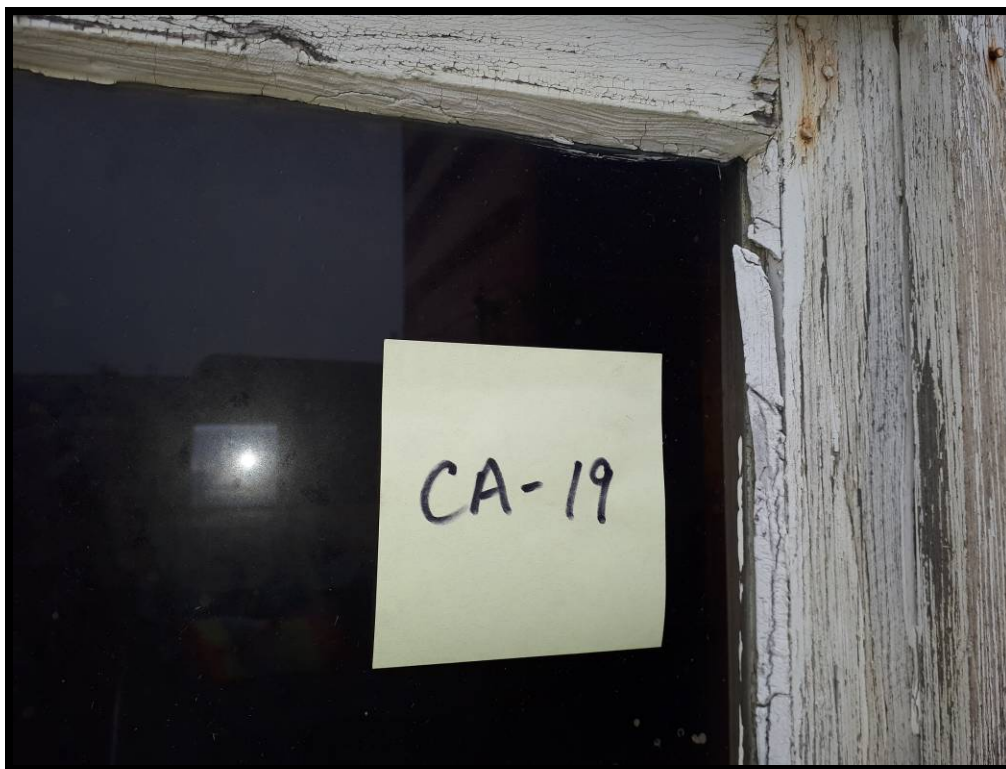


PHOTO # 42

Sample # CA – 19 : Asbestos-containing window glazing (white)
located on the Rip Track Fuel Shed.(0.5% chrysotile asbestos)

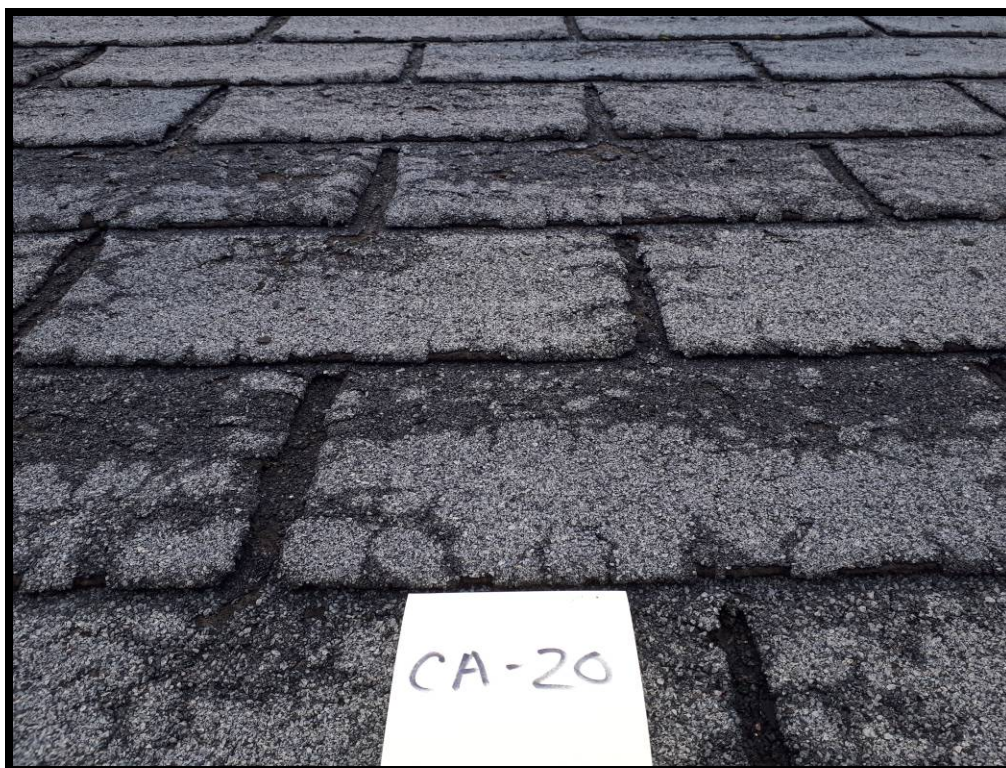


PHOTO # 43

Sample # CA – 20 : Non-asbestos tar roofing shingles (grey)
located on the Rip Track Building.

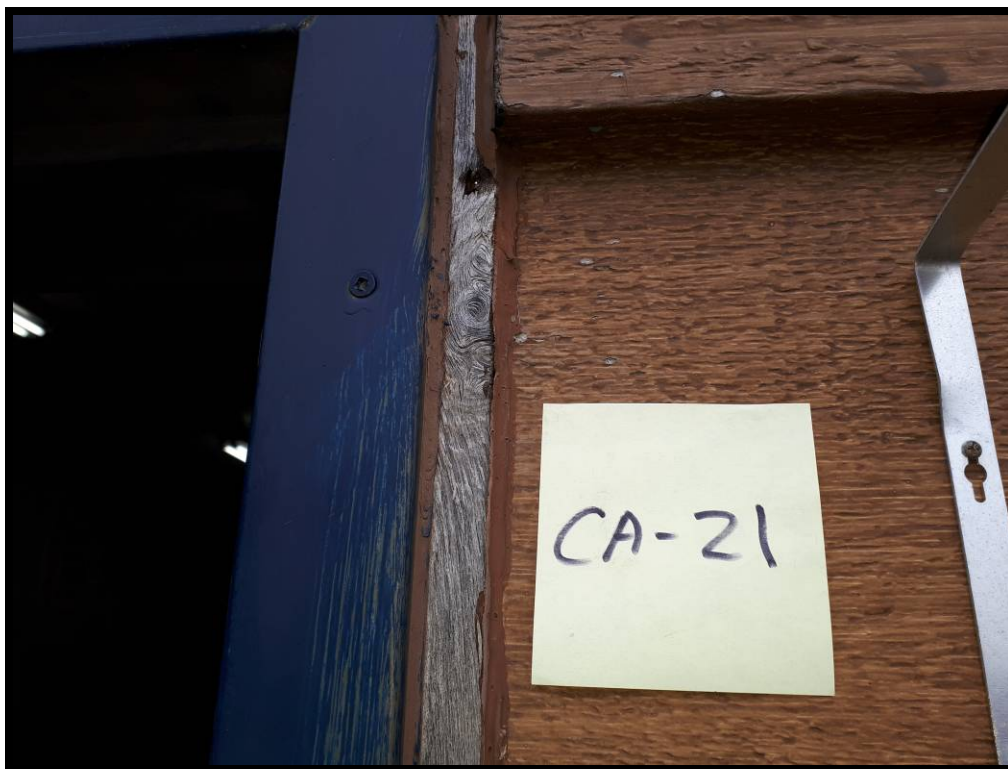


PHOTO # 44

Sample # CA – 21 : Non-asbestos exterior door caulking (brown)
located on the Rip Track Building.



PHOTO # 45

Sample # CA – 22 : Asbestos-containing exterior door and wall penetrations caulking (white)
located on the Coach Sewer Dump Storage Shed.(0.5% chrysotile asbestos)

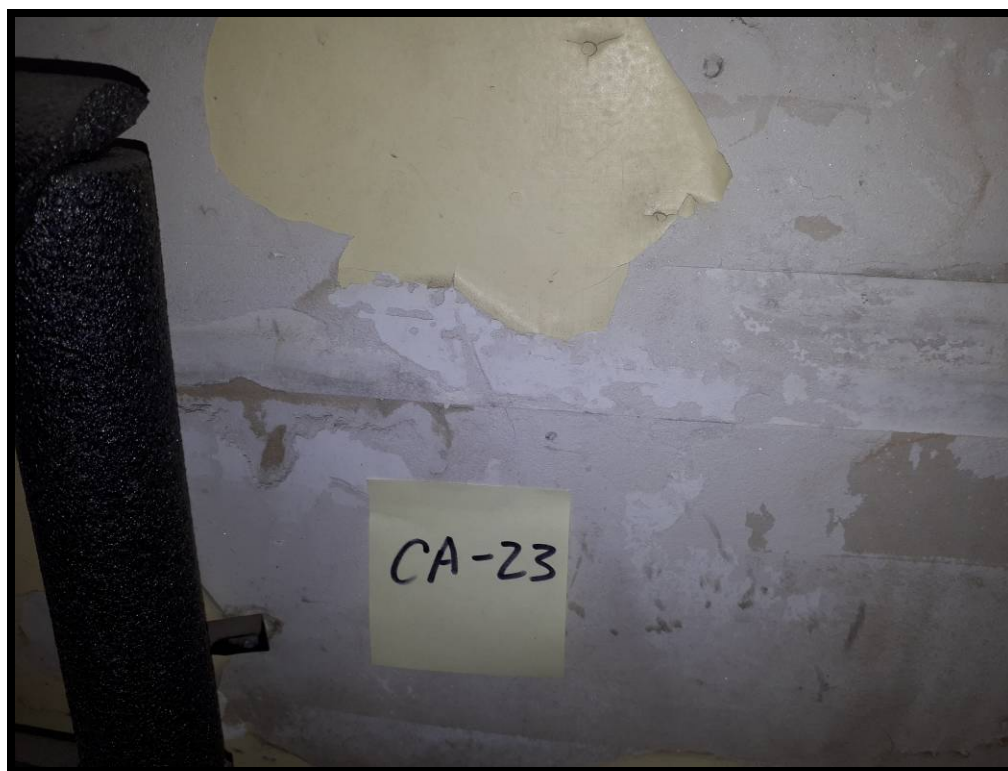


PHOTO # 46

*Sample # CA – 23 : Non-asbestos drywall joint compound (mud)
located on Office walls of the Freight Shed.*



PHOTO # 47

*Sample # CA – 24 : Non-asbestos drywall board
located on Office walls of the Freight Shed.*

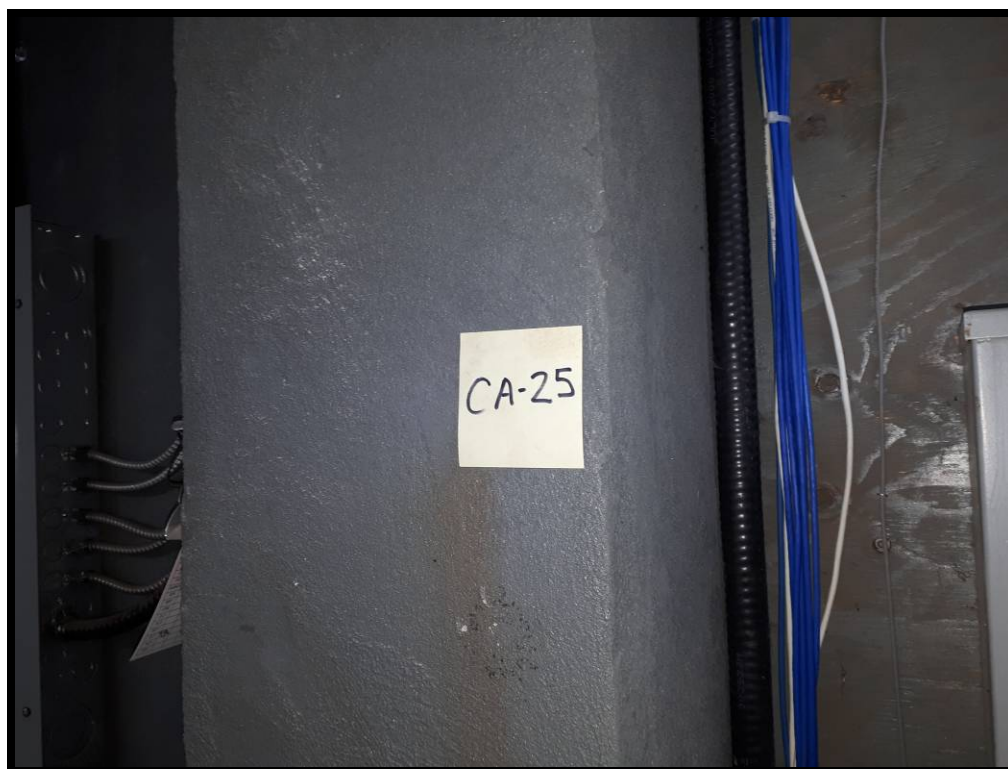


PHOTO # 48

*Sample # CA – 25 : Non-asbestos scratch coat on concrete walls
within the basement area of the Freight Shed.*

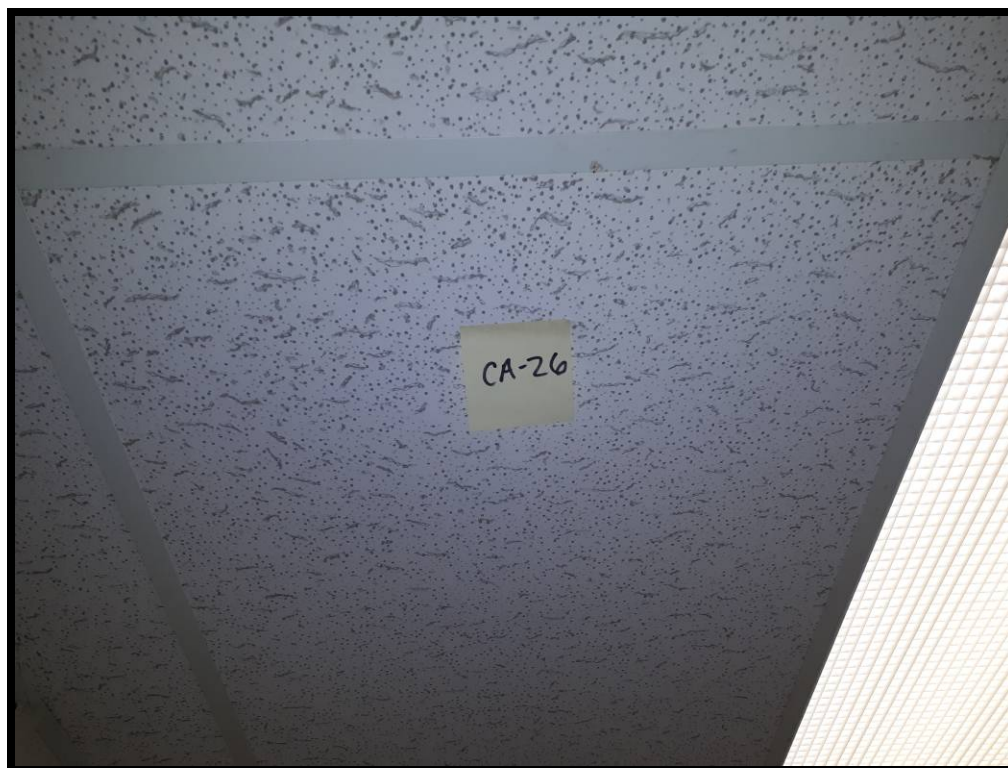


PHOTO # 49

*Sample # CA – 26 : Non-asbestos 2' x 4' drop ceiling tile located
within the basement office of the Freight Shed.*



PHOTO # 50

*Sample # CA – 27 : Non-asbestos exterior scratch coat located
on concrete foundation walls of the Freight Shed.*

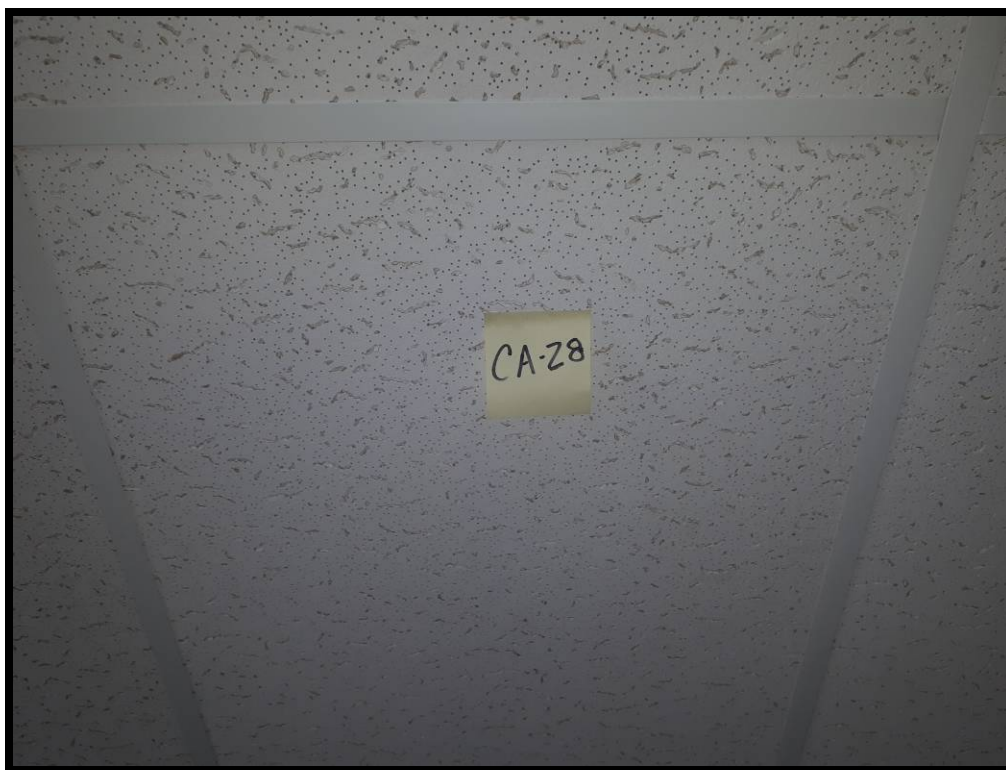


PHOTO # 51

*Sample # CA – 28 : Non-asbestos 2' x 4' drop ceiling tile located
within the main floor office area of the Freight Shed.*



PHOTO # 52

Sample # CA – 29 : Non-asbestos caulking (black) located on the retaining wall around the diesel tanks of the Locomotive Fueling Facility.

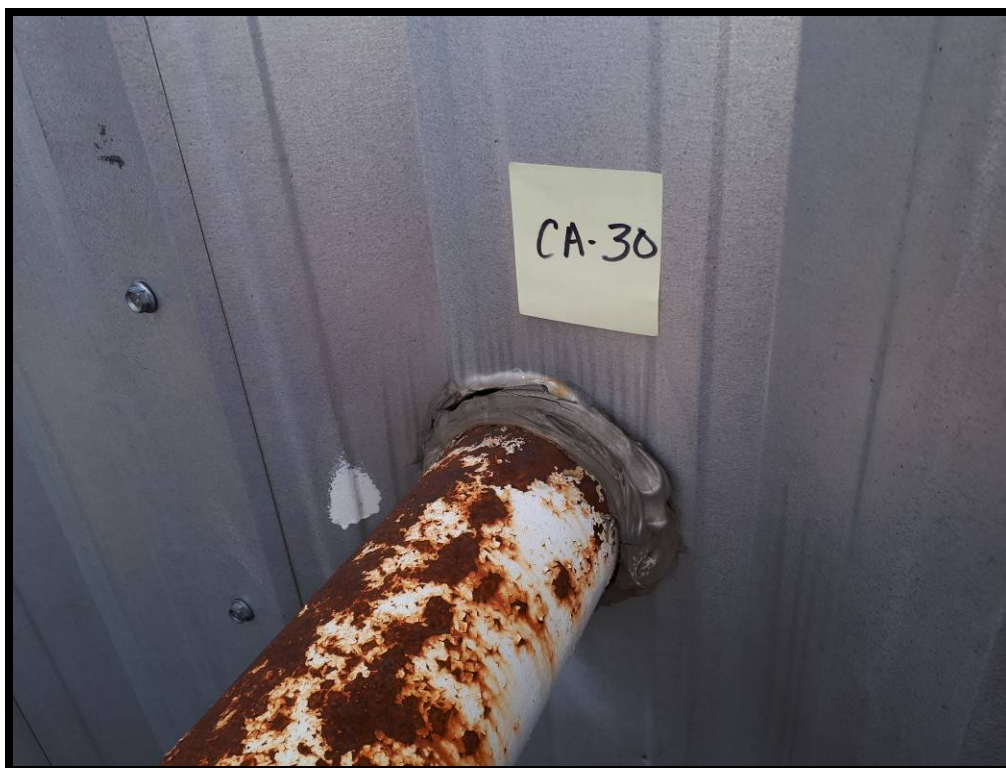


PHOTO # 53

Sample # CA – 30 : Non-asbestos caulking (silver) located around wall penetrations on the Quonset Hut building of the Locomotive Fueling Facility.



PHOTO # 54

Sample # CA – 31 : Non-asbestos exterior window caulking (clear) located on the Green Shed.

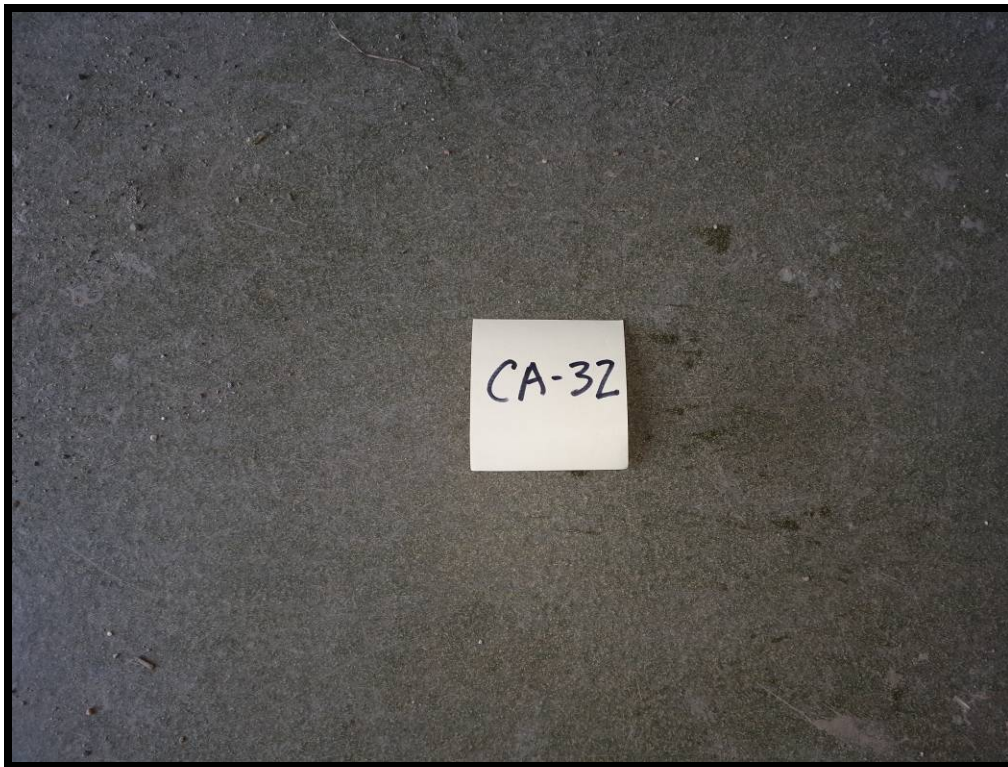


PHOTO # 55

Sample # CA – 32 : Non-asbestos resin coated flooring (green) located within the MOW Water Shed.



PHOTO # 56

Sample # CA – 33 : Asbestos-containing interior “Transite” wall panels (grey)
located within the MOW Water Shed.(40% chrysotile asbestos)



PHOTO # 57

Sample # CA – 34 : Non-asbestos scratch coat located on exterior foundation walls of the Diesel Shop.



PHOTO # 58

Sample # CA – 35 : Non-asbestos caulking (brown) used on roof top HVAC unit located on the Diesel Shop.



PHOTO # 59

Sample # CA – 36 : Non-asbestos interior wall and ceiling insulation within the roof top HVAC unit located on the Diesel Shop.

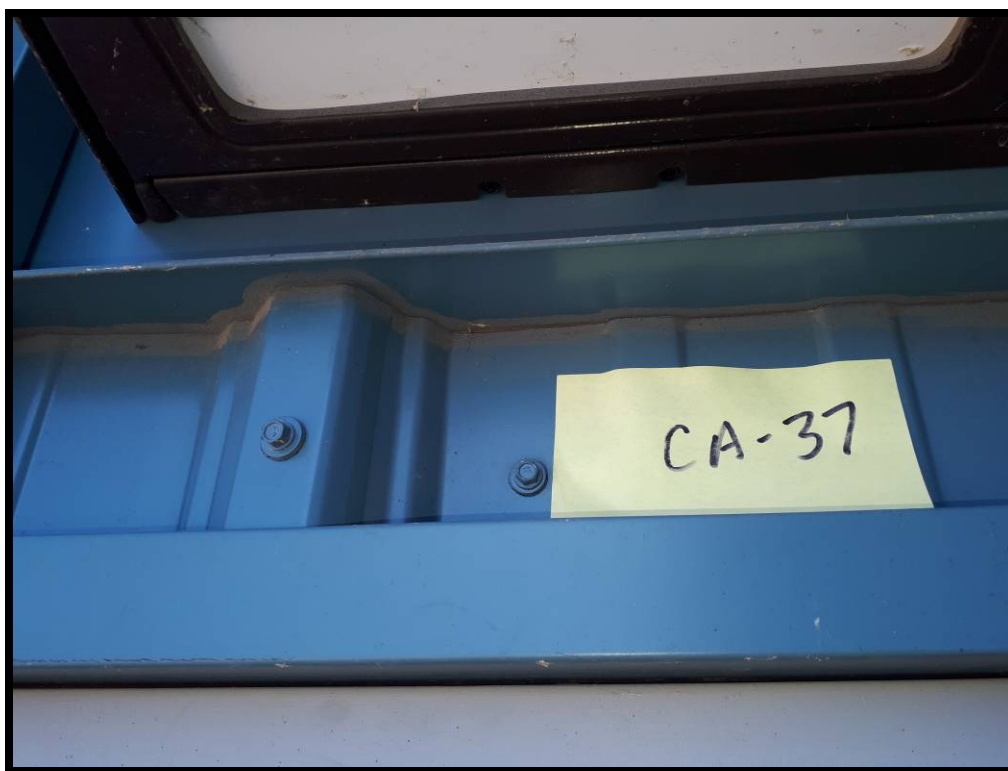


PHOTO # 60

Sample # CA – 37 : Non-asbestos exterior window and door caulking located on the Diesel Shop.



PHOTO # 61

Sample # CA – 38 : Non-asbestos 12" x 12" vinyl floor tile (grey) and tile mastic located within Office #1 of the Diesel Shop.

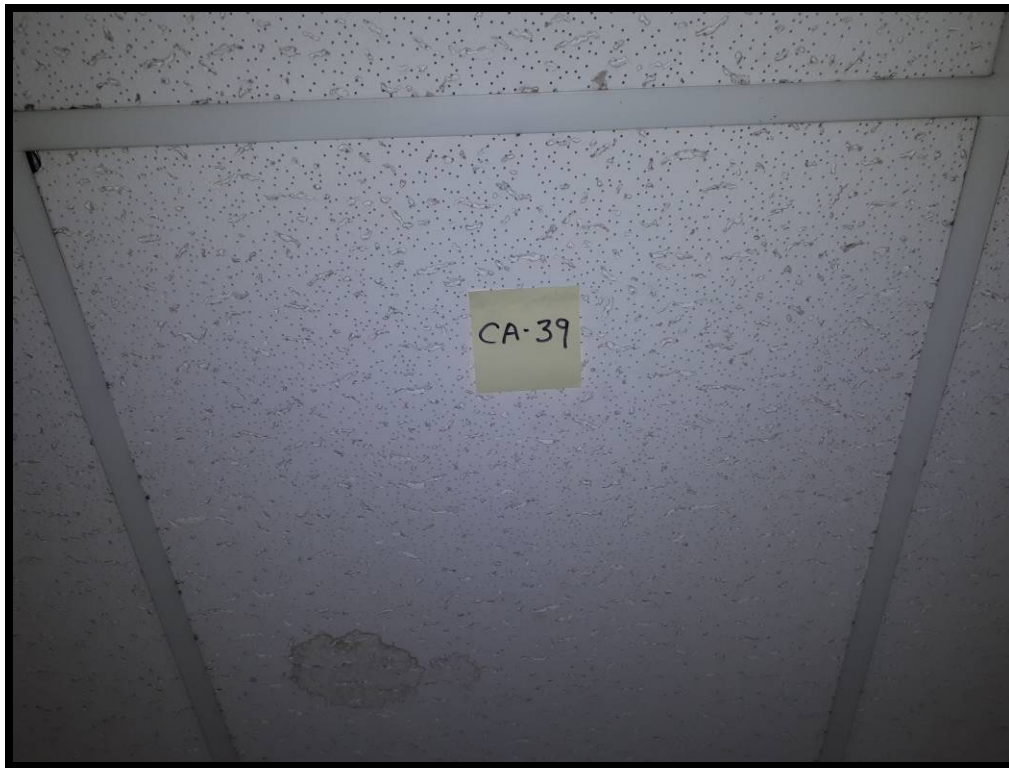


PHOTO # 62

*Sample # CA – 39 : Non-asbestos 2' x 4' drop ceiling tile
located within Office #1 of the Diesel Shop.*



PHOTO # 63

*Sample # CA – 40 : Non-asbestos drywall joint compound (mud)
located within Office #1 of the Diesel Shop.*



PHOTO # 64

Sample # CA – 41 : Non-asbestos 12" x 12" ceiling tile mastic (brown)
located within Office #2 of the Diesel Shop.

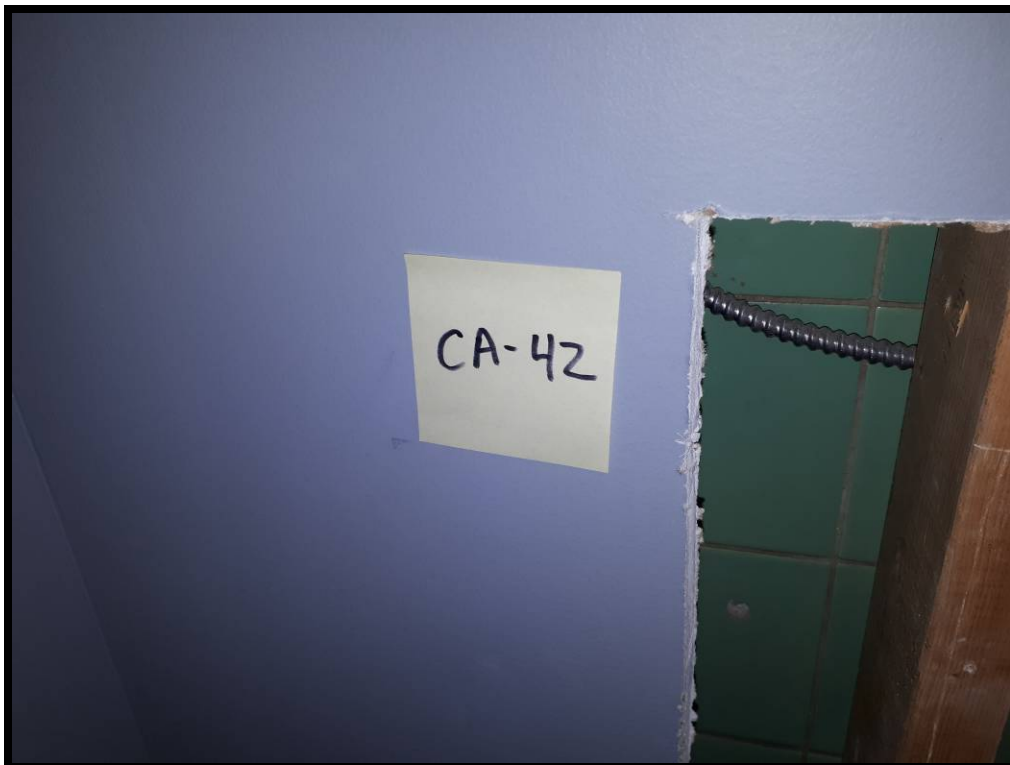


PHOTO # 65

Sample # CA – 42 : Non-asbestos drywall board (walls)
located within Office #2 of the Diesel Shop.

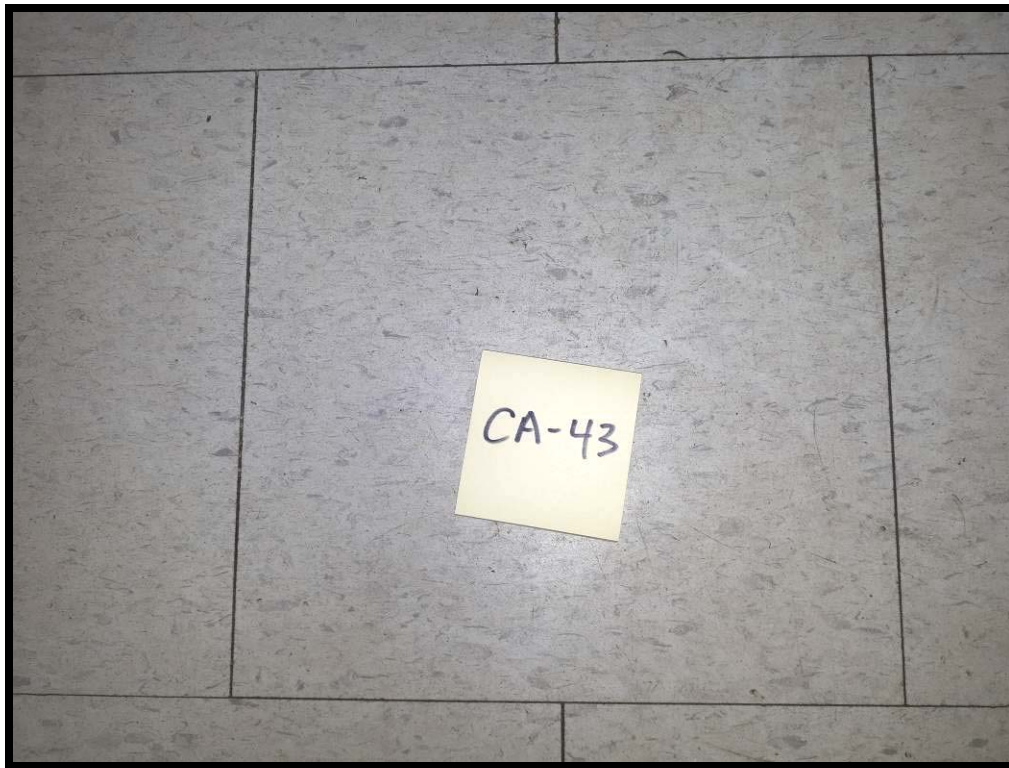


PHOTO # 66

Sample # CA – 43 : Non-asbestos 12" x 12" vinyl floor tile (white)
located within the Girl's Washroom of the Diesel Shop.

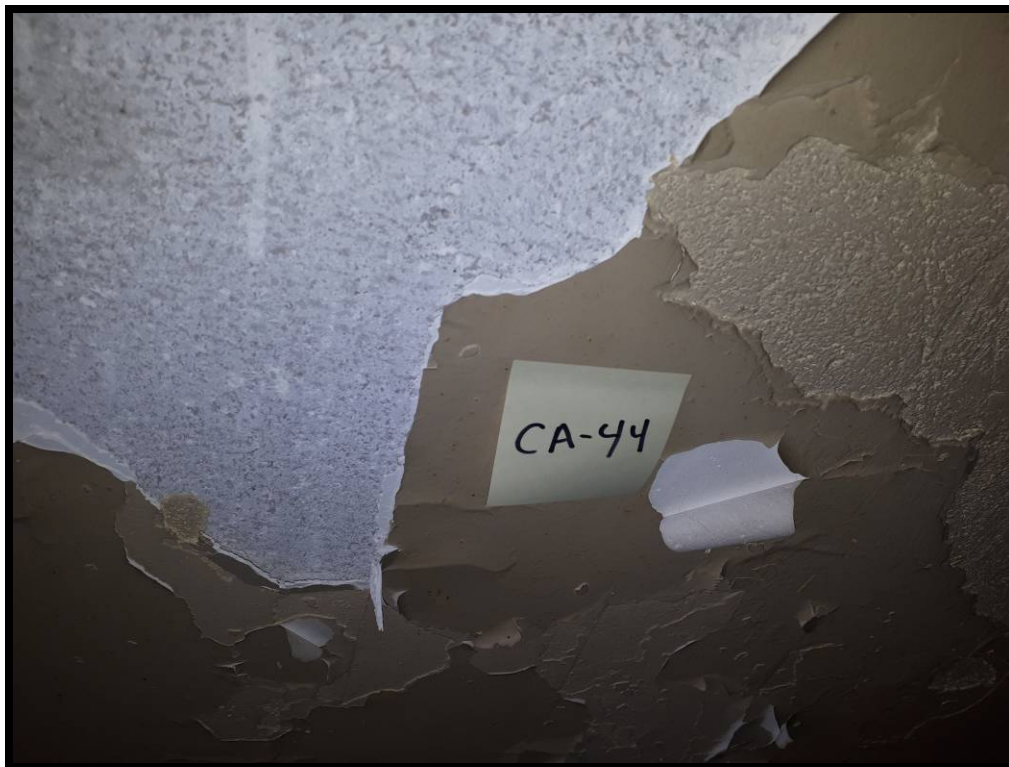


PHOTO # 67

Sample # CA – 44 : Non-asbestos ceiling plaster located
within Room B-1 (basement level) of the Diesel Shop.



PHOTO # 68

Sample # CA – 45 : Asbestos-containing pipe insulation (aircell) located on "old" heating lines in Room B-2 (basement level) of the Diesel Shop. (70% chrysotile asbestos)



PHOTO # 69

Sample # CA – 46 : Asbestos-containing pipe insulation (anti-sweat) located on domestic cold water lines in Room B-2 (basement level) of the Diesel Shop. (0.5% chrysotile asbestos)



PHOTO # 70

Sample # CA – 47 : Asbestos-containing "Transite" panels on man door in Room B-3 (basement level) of the Diesel Shop. (40% chrysotile asbestos)



PHOTO # 71

Sample # CA – 48 : Asbestos-containing pipe insulation (mag block) located old steam heating lines within Room B-3 (basement level) of the Diesel Shop. (1% chrysotile and 4% amosite asbestos)



PHOTO # 72

Sample # CA – 49 : Asbestos-containing elbow/fitting insulation on heating & domestic piperuns within Room B-3 (basement level) of the Diesel Shop. (50% chrysotile asbestos)

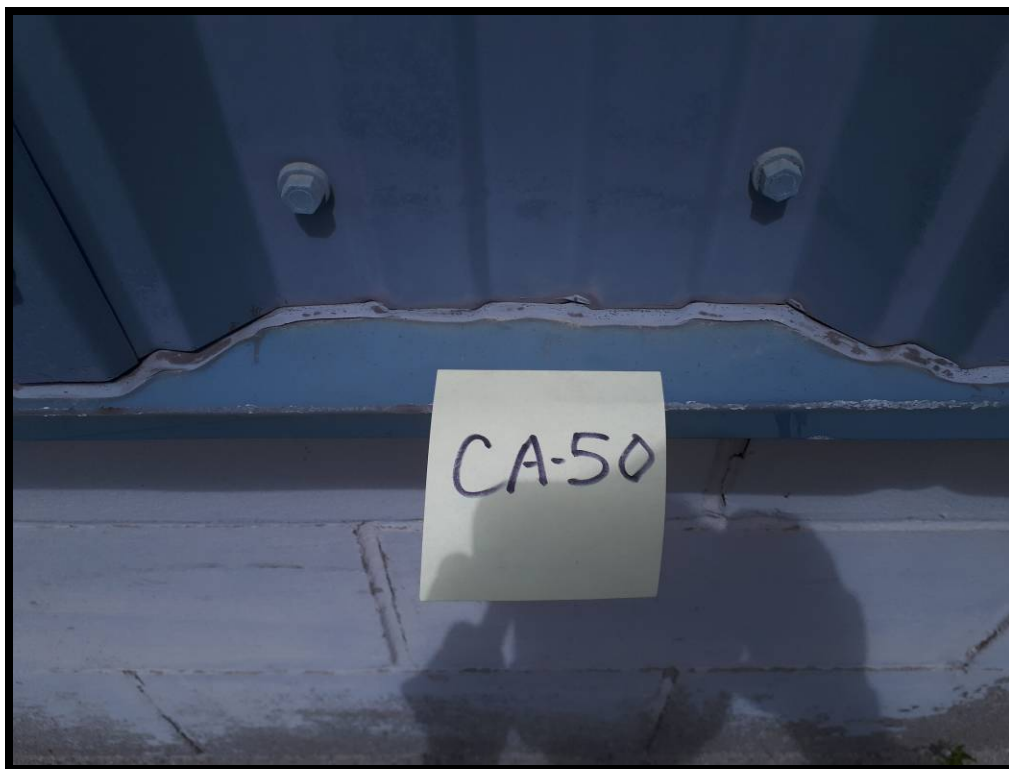


PHOTO # 73

Sample # CA – 50 : Non-asbestos exterior wall caulking (white) located on the Yard Shop.

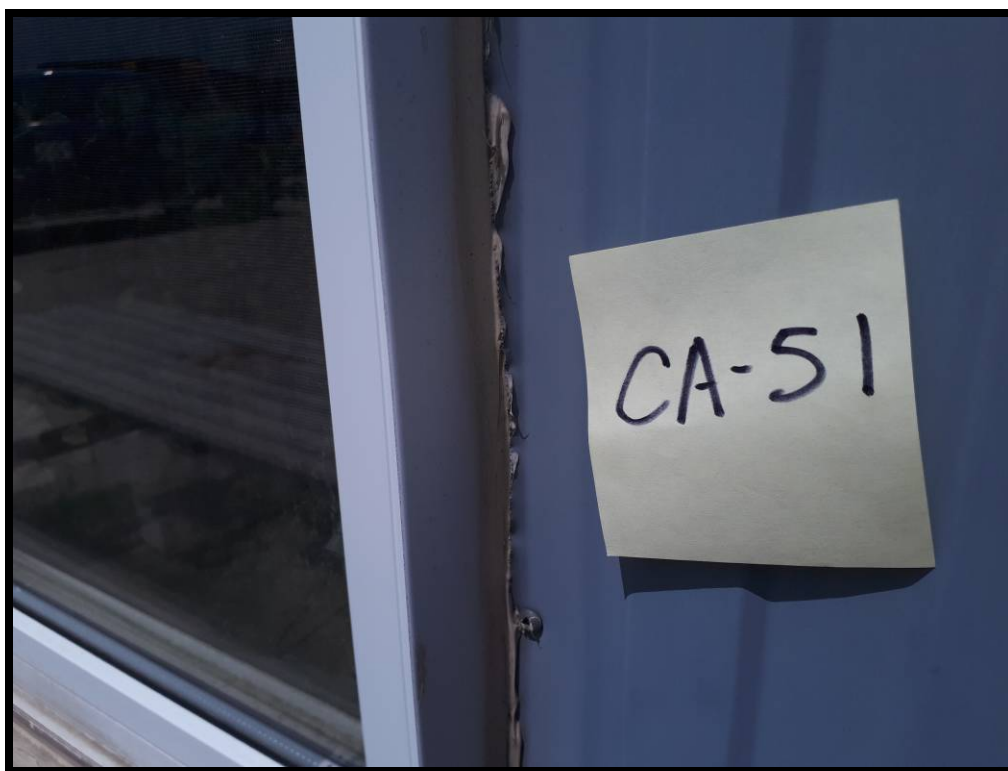


PHOTO # 74

Sample # CA – 51 : Non-asbestos exterior window and door caulking (grey)
located on the Yard Shop.

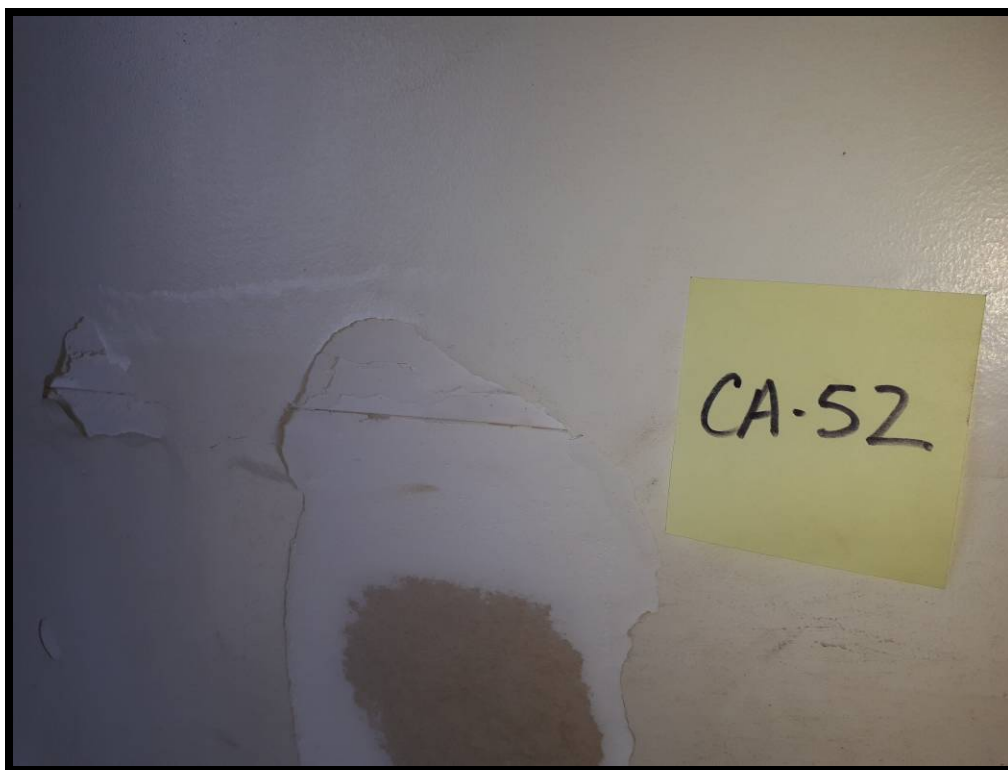


PHOTO # 75

Sample # CA – 52 : Non-asbestos drywall joint compound (mud)
located within Hallway #1 of the Yard Shop.

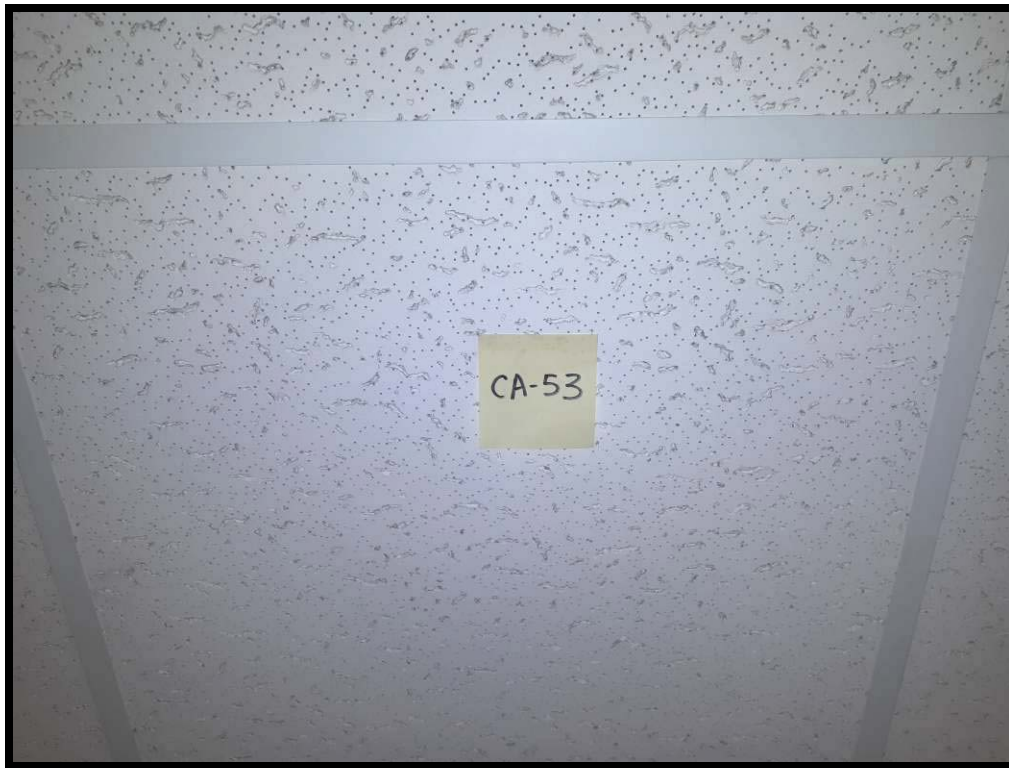


PHOTO # 76

Sample # CA – 53 : Non-asbestos 2' x 2' drop ceiling tile located within the Office Section of the Yard Shop.

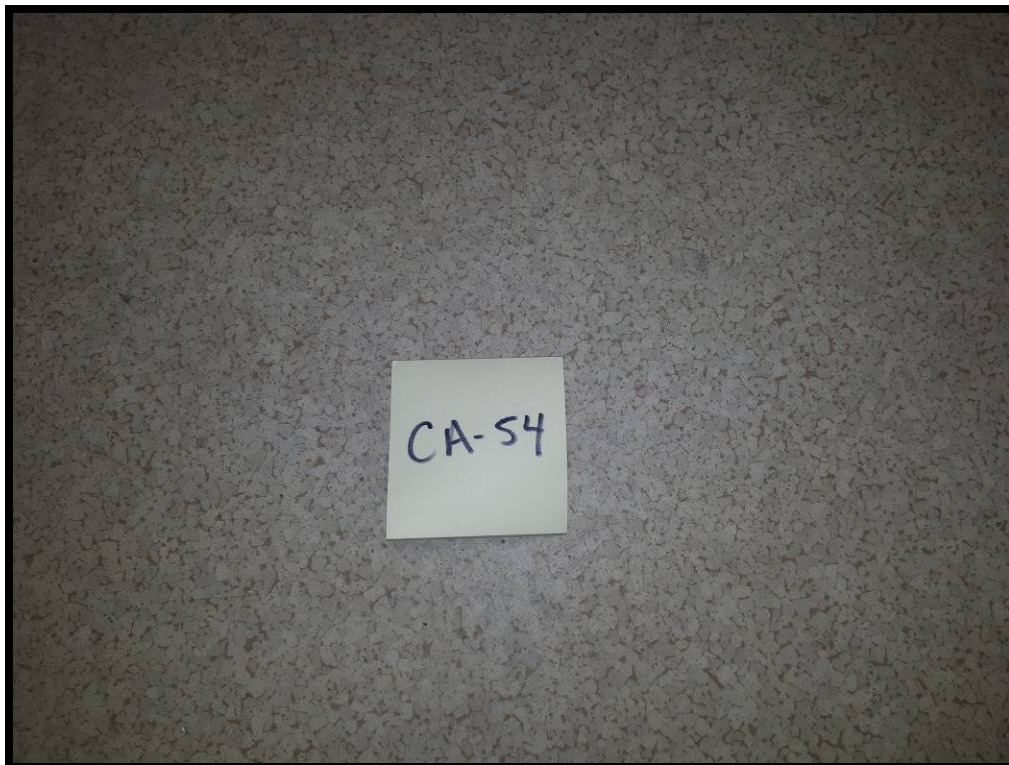


PHOTO # 77

Sample # CA – 54 : Non-asbestos roll vinyl flooring (beige) located within the Office Section of the Yard Shop.



PHOTO # 78

Sample # CA – 55 : Non-asbestos elbow/fitting insulation located on piperuns within the Office Section of the Yard Shop.

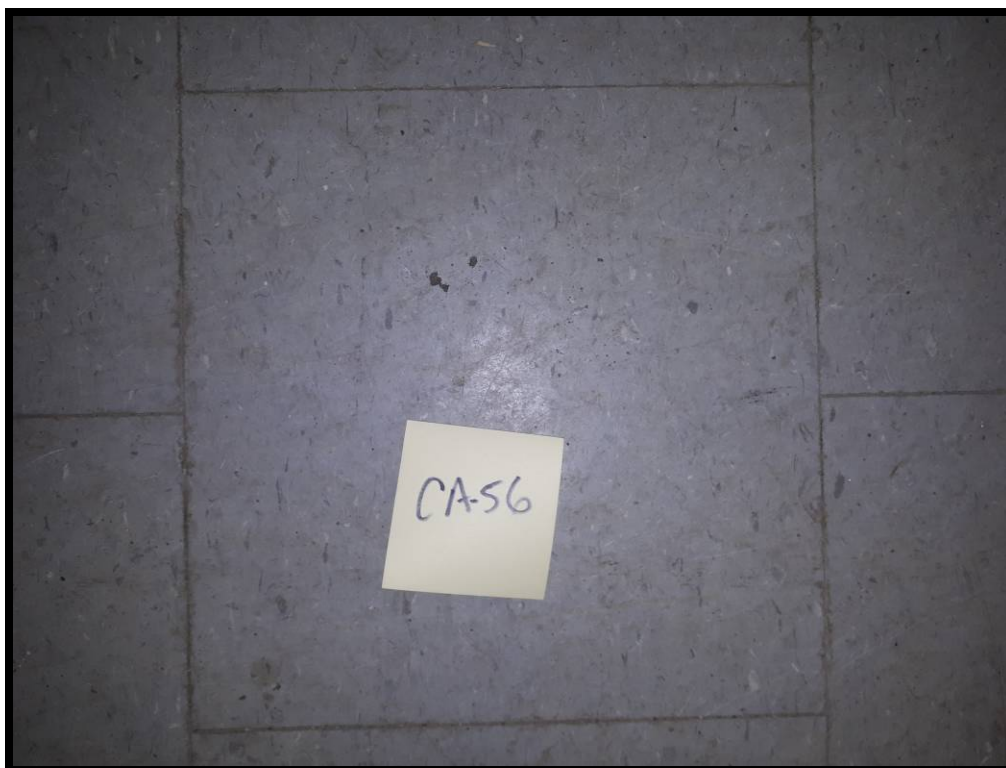


PHOTO # 79

Sample # CA – 56 : Non-asbestos 12" x 12" vinyl floor tile (grey) located within the Signals Store Section of the Yard Shop.

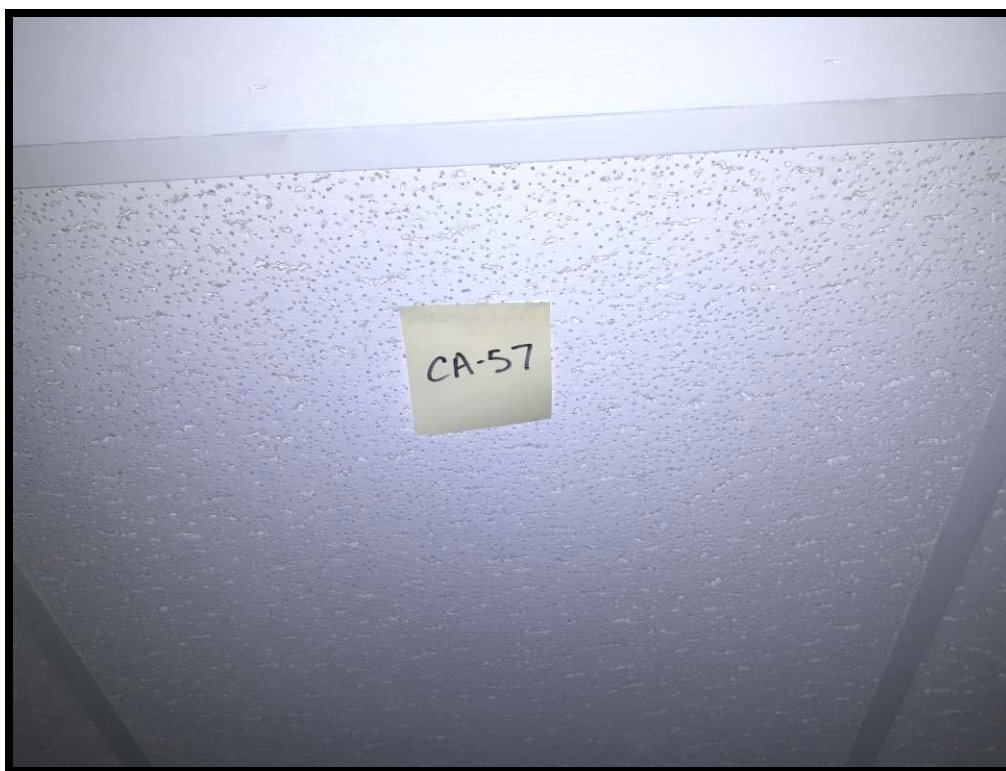


PHOTO # 80

Sample # CA – 57 : Non-asbestos 2' x 4' drop ceiling tile located within the Signals Store Section of the Yard Shop.

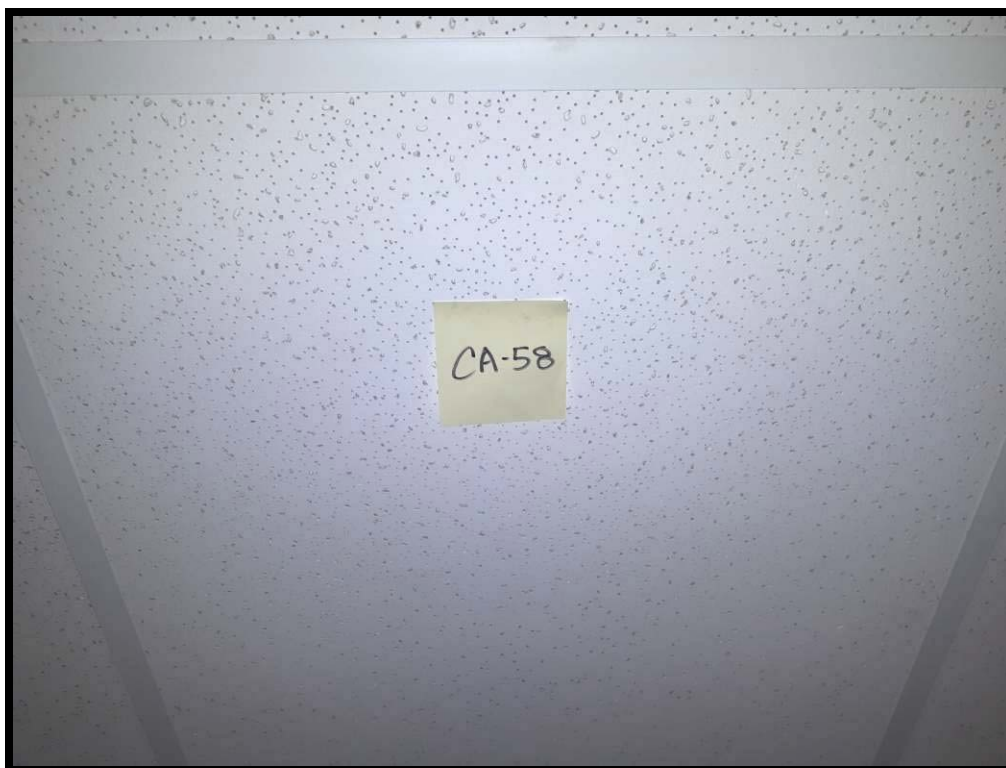


PHOTO # 81

Sample # CA – 58 : Non-asbestos 2' x 4' drop ceiling tile (fine holes) located within the Signals Store Section of the Yard Shop.

APPENDIX 'B'
***Lead Lab Transcripts
&
Sample Photos***



CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G00001

REPORT No. B23-04071

Report To:

Thomas Contracting
72 Ninovan Road,
Callander ON P0H 1H0 Canada
Attention: Grant Johnson

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

DATE RECEIVED: 10-Jul-23

JOB/PROJECT NO.: ONTC - Cochrane - DSS

DATE REPORTED: 14-Jul-23

P.O. NUMBER: TC-201612

SAMPLE MATRIX: Paint Chips

WATERWORKS NO.

Parameter	Lead				
Units	ppm (mass)				
R.L.	5				
Reference Method	EPA 6010				
Date Analyzed/Site	14-Jul-23/O				

Client I.D.	Sample I.D.	Date Collected				
CL-1	B23-04071-1	14-Jun-23	35			
CL-2	B23-04071-2	14-Jun-23	< 5			
CL-3	B23-04071-3	14-Jun-23	31			
CL-4	B23-04071-4	14-Jun-23	30			
CL-5	B23-04071-5	14-Jun-23	501			
CL-6	B23-04071-6	14-Jun-23	7			
CL-7	B23-04071-7	14-Jun-23	7			
CL-8	B23-04071-8	14-Jun-23	< 5			
CL-9	B23-04071-9	14-Jun-23	< 5			
CL-10	B23-04071-10	14-Jun-23	22500			
CL-11	B23-04071-11	14-Jun-23	26			
CL-12	B23-04071-12	14-Jun-23	37			
CL-13	B23-04071-13	15-Jun-23	< 5			
CL-14	B23-04071-14	15-Jun-23	35			
CL-15	B23-04071-15	15-Jun-23	42			
CL-16	B23-04071-16	15-Jun-23	< 5			
CL-17	B23-04071-17	15-Jun-23	341			
CL-18	B23-04071-18	15-Jun-23	289			
CL-19	B23-04071-19	15-Jun-23	18			
CL-20	B23-04071-20	15-Jun-23	419			
CL-21	B23-04071-21	16-Jun-23	163			
CL-22	B23-04071-22	16-Jun-23	< 5			

Andrea Schneider
Technical Supervisor

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



CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G00001

REPORT No. B23-04071

Report To:

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

Attention: Grant Johnson

Caduceon Environmental Laboratories

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

DATE RECEIVED: 10-Jul-23

JOB/PROJECT NO.: ONTC - Cochrane - DSS

DATE REPORTED: 14-Jul-23

P.O. NUMBER: TC-201612

SAMPLE MATRIX: Paint Chips

WATERWORKS NO.

Parameter			Lead				
Units			ppm (mass)				
R.L.			5				
Reference Method			EPA 6010				
Date Analyzed/Site			14-Jul-23/O				

Client I.D.	Sample I.D.	Date Collected					
CL-23	B23-04071-23	16-Jun-23	< 5				
CL-24	B23-04071-24	16-Jun-23	5800				
CL-25	B23-04071-25	29-Jun-23	5640				
CL-26	B23-04071-26	29-Jun-23	8100				
CL-27	B23-04071-27	29-Jun-23	2070				
CL-28	B23-04071-28	29-Jun-23	60000				
CL-29	B23-04071-29	29-Jun-23	51600				
CL-30	B23-04071-30	29-Jun-23	9				
CL-31	B23-04071-31	29-Jun-23	13				
CL-32	B23-04071-32	29-Jun-23	< 5				
CL-33	B23-04071-33	29-Jun-23	< 5				

Andrea Schneider
Technical Supervisor

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



Photo # 82

Sample # CL – 1 : Interior wall & ceiling paint located within the Coach Cleaner Storage Shed.
Deem to be Low-level lead paint. (surface colour = white)

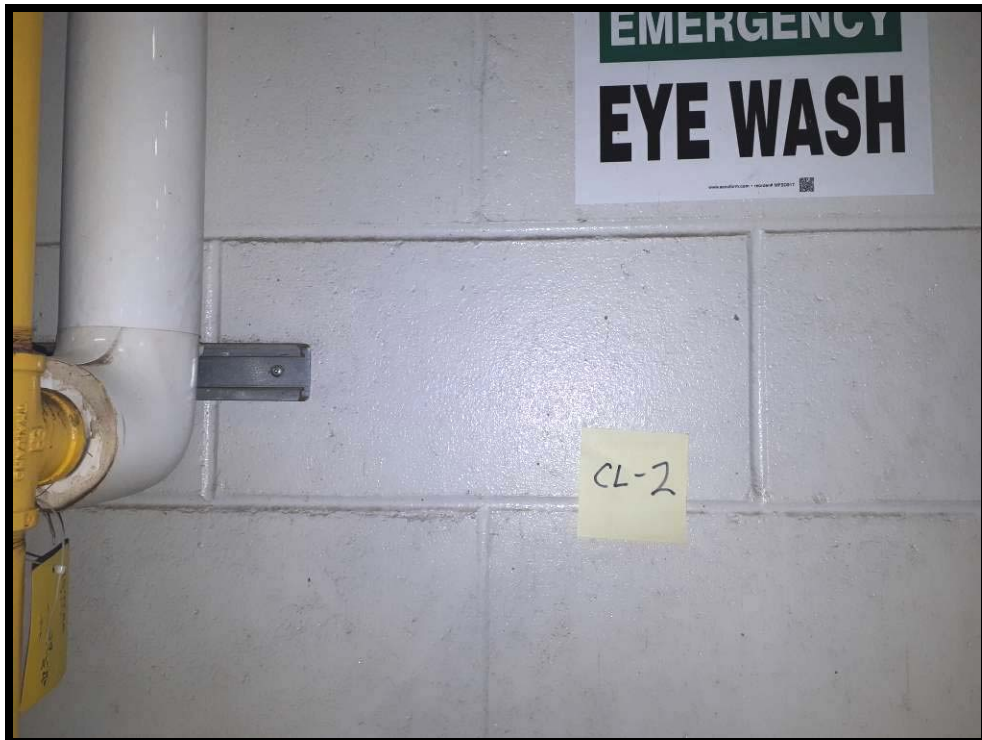


Photo # 83

Sample # CL – 2 : Interior wall paint located within lunchroom of the Coach Shop.
Deem to be Low-level lead paint. (surface colour = light blue)



Photo # 84

Sample # CL – 3 : Structural steel paint located within the Coach Shop.
Deem to be Low-level lead paint. (surface colour = grey)



Photo # 85

Sample # CL – 4 : Guard Rail Paint – Mezzanine level of the Coach Shop.
Deem to be Low-level lead paint. (surface colour = yellow)



Photo # 86

Sample # CL – 5 : Structural steel paint within the Wheel Drop Pit Shelter.
Deem to be Low-level lead paint. (surface colour = grey)

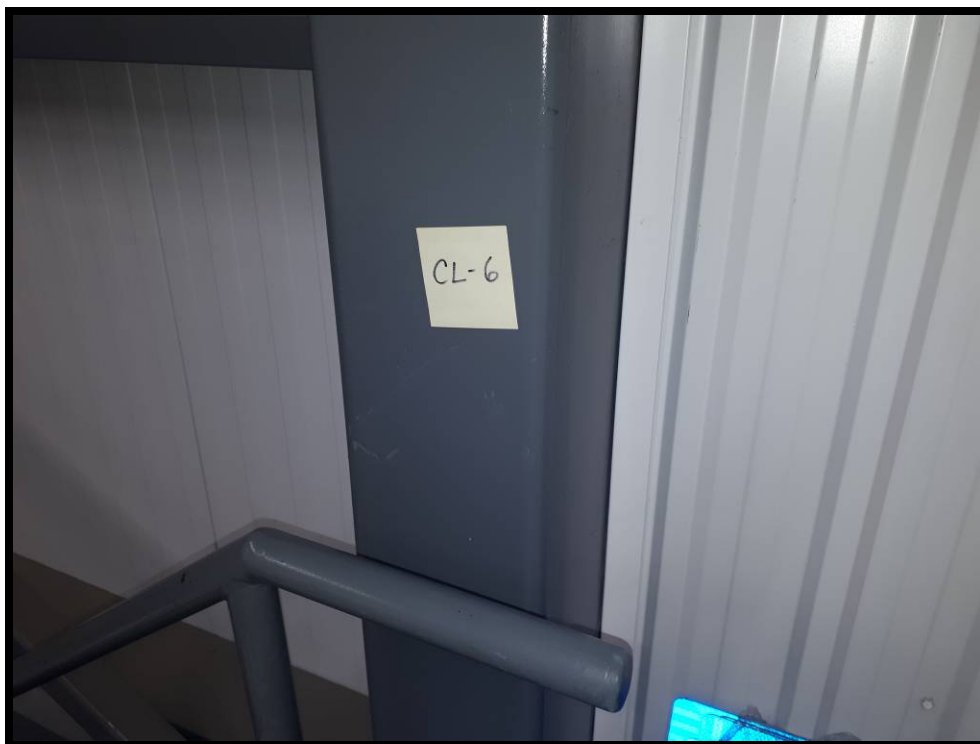


Photo # 87

Sample # CL – 6 : Structural steel paint within Stores.
Deem to be Low-level lead paint. (surface colour = grey)

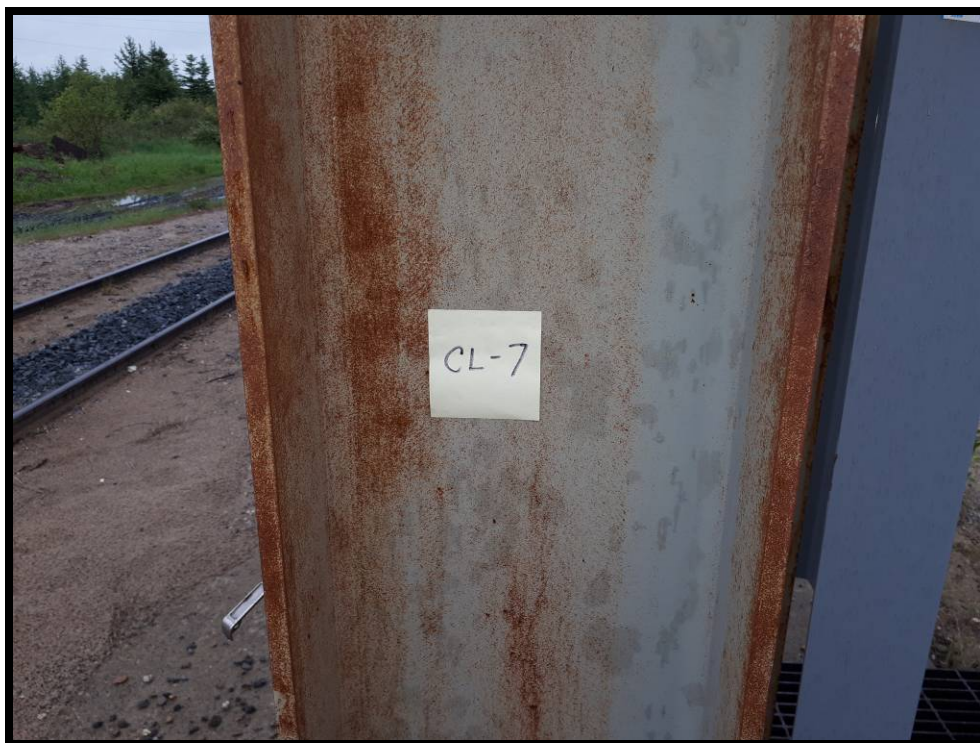


Photo # 88

Sample # CL – 7 : Structural steel paint on Locomotive Sanding Tower.
Deem to be Low-level lead paint. (surface colour = grey)



Photo # 89

Sample # CL – 8 : Exterior wall paint on the Scale Building.
Deem to be Low-level lead paint. (surface colour = white)



Photo # 90

Sample # CL – 9 : Interior wall paint on the Scale Building.
Deem to be Low-level lead paint. (surface colour = white)



Photo # 91

Sample # CL – 10 : Scale paint within basement of the Scale Building.
Deem to be Lead-based paint. (surface colour = silver)



Photo # 92

Sample # CL – 11 : Exterior wall paint on the Tool Shed.
Deem to be Low-level lead paint. (surface colour = blue)



Photo # 93

Sample # CL – 12 : Exterior wall paint on Storage Shed #1.
Deem to be Low-level lead paint. (surface colour = blue)



Photo # 94

Sample # CL – 13 : Exterior door paint on the MOW Storage Shed.
Deem to be Low-level lead paint. (surface colour = blue)



Photo # 95

Sample # CL – 14 : Exterior wall paint on the Rip Track Fuel Shed.
Deem to be Low-level lead paint. (surface colour = brown)



Photo # 96

Sample # CL – 15 : Exterior wall paint on the Rip Track Building.
Deem to be Low-level lead paint. (surface colour = brown)



Photo # 97

Sample # CL – 16 : Interior wall paint on the Rip Track Building.
Deem to be Low-level lead paint. (surface colour = grey)

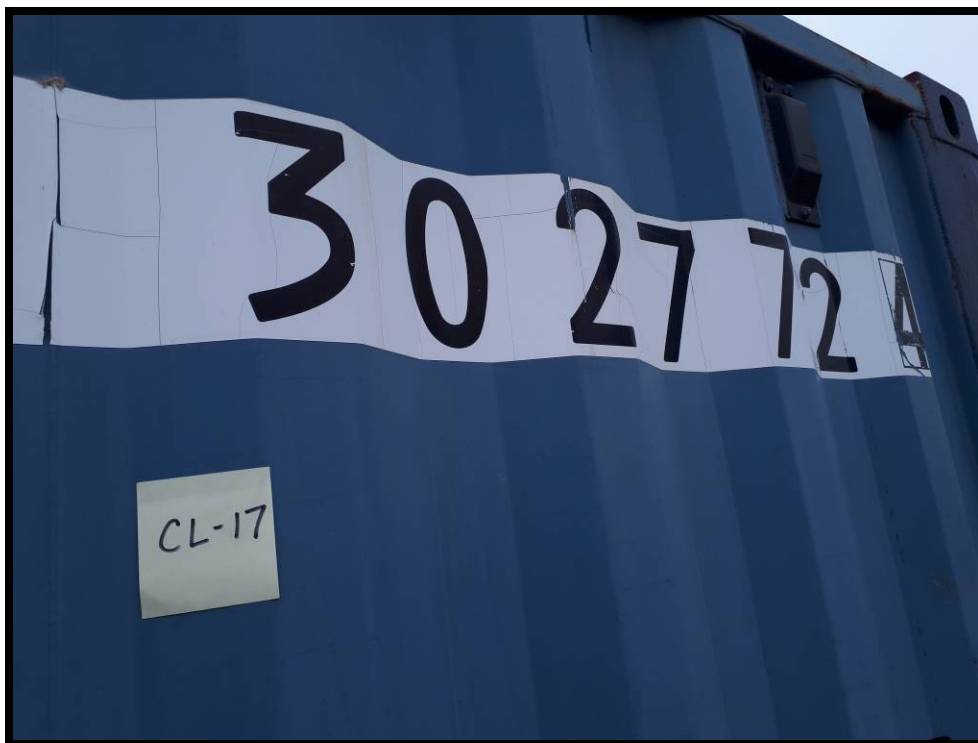


Photo # 98

Sample # CL – 17 : Exterior wall & roof paint on the Track Equipment Sheds (sea cans).
Deem to be Low-level lead paint. (surface colour = blue)

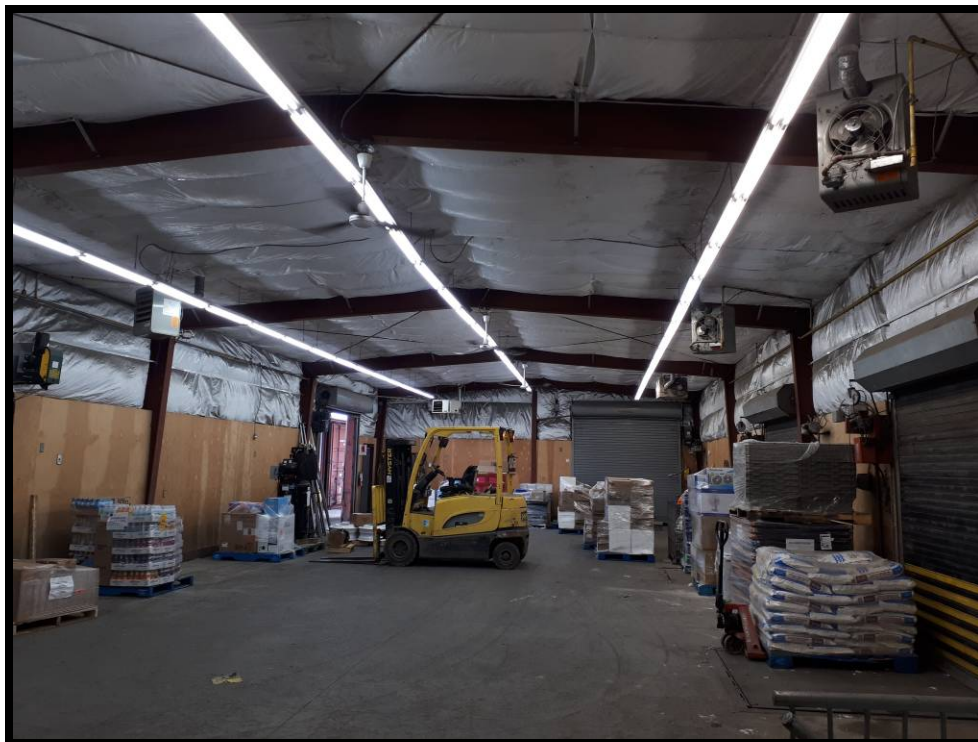


Photo # 99

Sample # CL – 18 : Structural steel primer on steel beams within the Freight Shed.
Deem to be Low-level lead paint. (surface colour = red)



Photo # 100

Sample # CL – 19 : Interior wall paint located within the loading bay of the Freight Shed.
Deem to be Low-level lead paint. (surface colour = yellow)

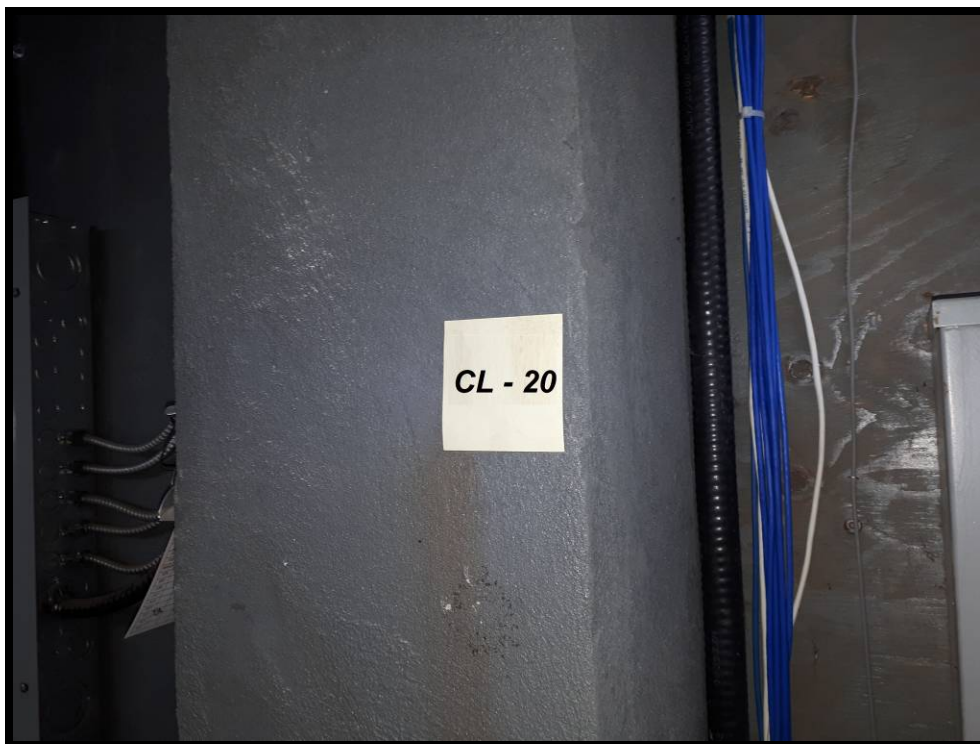


Photo # 101

Sample # CL – 20 : Interior wall paint located within the basement of the Freight Shed.
Deem to be Low-level lead paint. (surface colour = grey)



Photo # 102

Sample # CL – 21 : Steel fuel tank and piping paint located within the Locomotive Fueling Facility.
Deem to be Low-level lead paint. (surface colour = white)

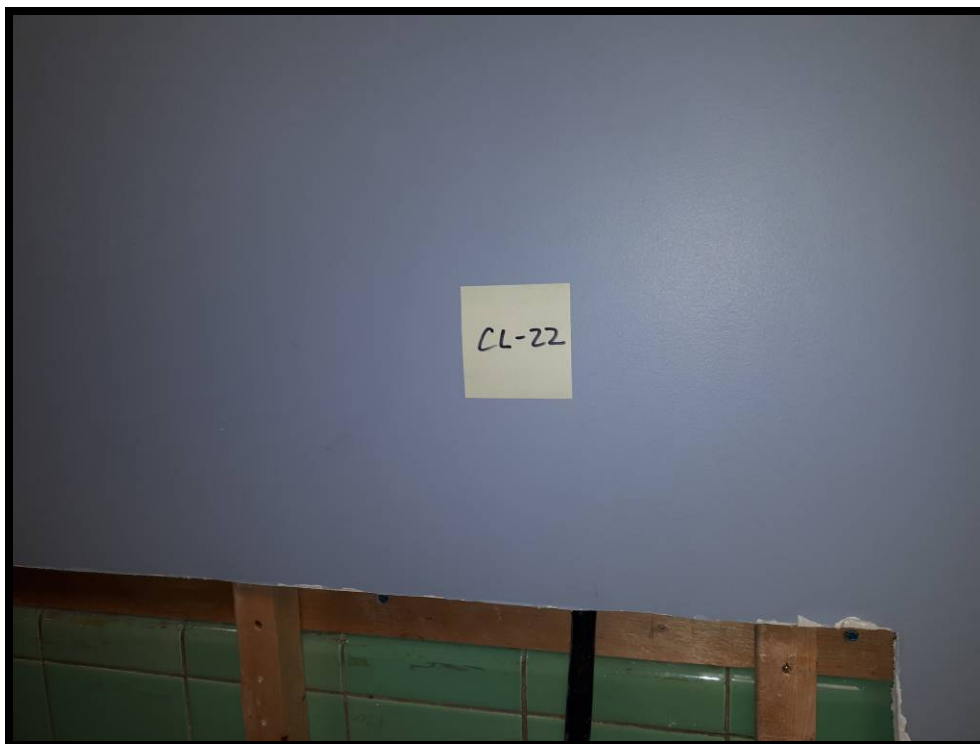


Photo # 103

Sample # CL – 22 : Interior wall paint located within Office #2 of the Diesel Shop.
Deem to be Low-level lead paint. (surface colour = grey)

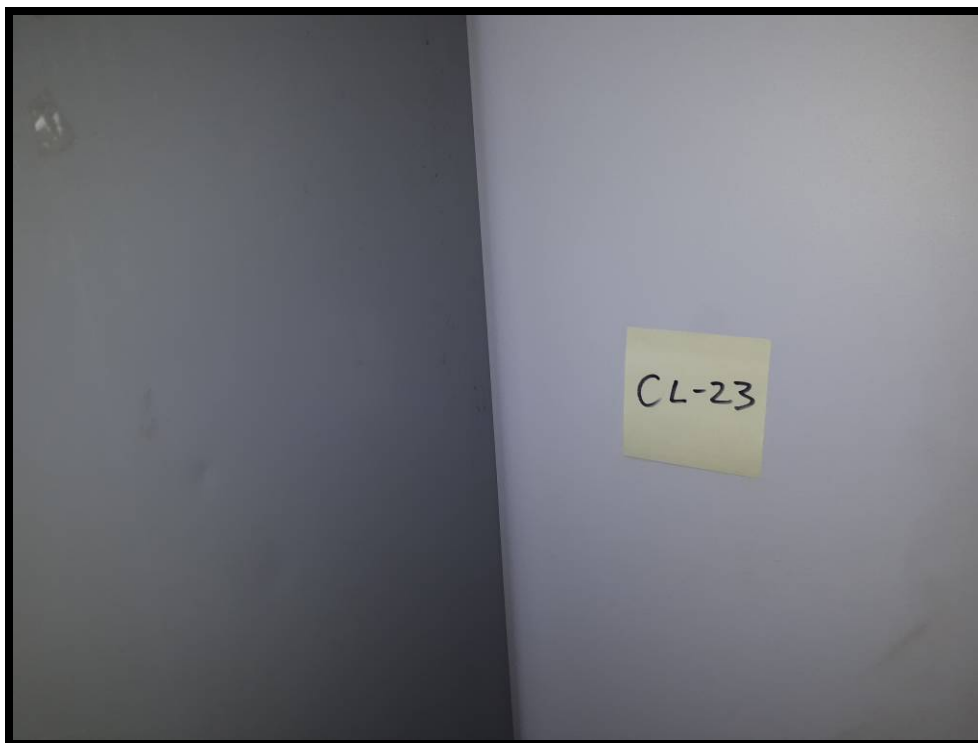


Photo # 104

Sample # CL – 23 : Interior wall paint located within the Men's Washroom of the Diesel Shop.
Deem to be Low-level lead paint. (surface colour = light grey)

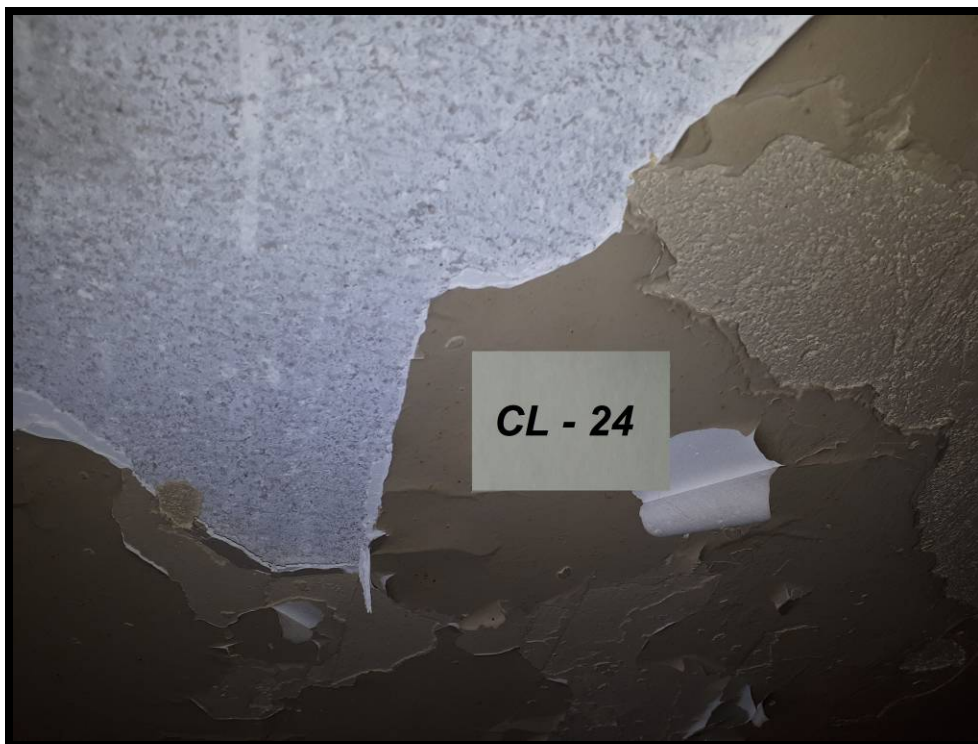


Photo # 105

Sample # CL – 24 : Interior wall and ceiling paint located within Room B-1 (basement) of the Diesel Shop.
Deem to be Lead-based paint. (surface colour = beige)



Photo # 106

Sample # CL – 25 : Interior wall and ceiling paint located within Room B-2 (basement) of the Diesel Shop.
Deem to be Lead-based paint. (surface colour = yellow)

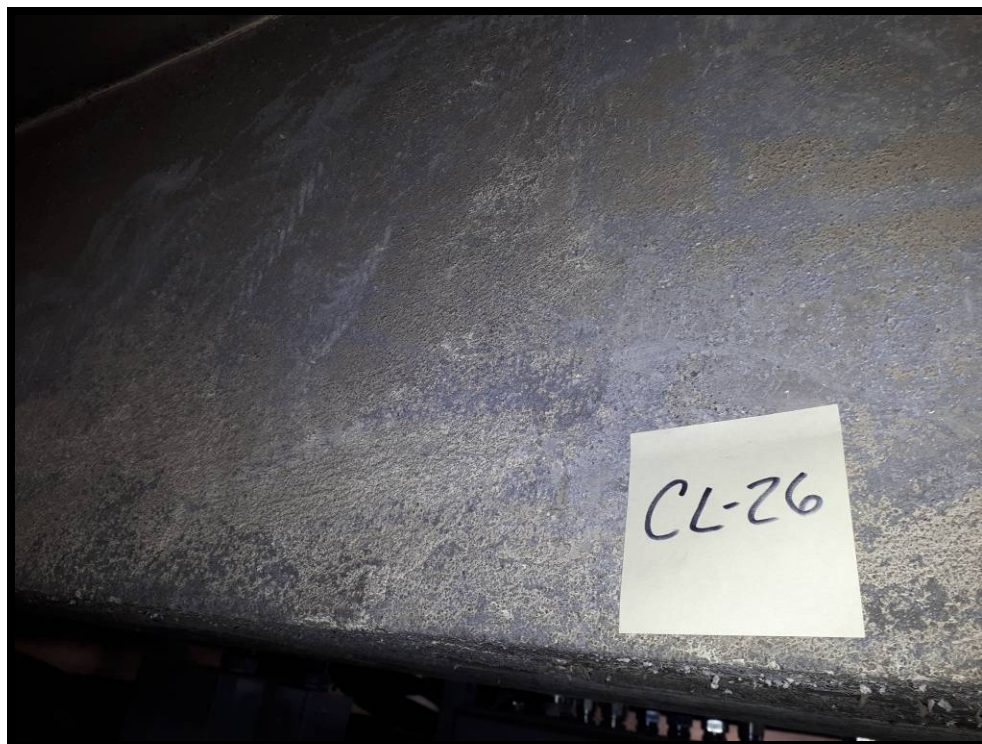


Photo # 107

Sample # CL – 26 : Interior wall and ceiling paint located within Room B-3 (basement) of the Diesel Shop.
Deem to be Lead-based paint. (surface colour = dark green)



Photo # 108

Sample # CL – 27 : Interior wall and ceiling paint located within Room B-5 (basement) of the Diesel Shop.
Deem to be Lead-containing paint. (surface colour = beige)



Photo # 109

Sample # CL – 28 : Structural steel primer/paint located within the Main Shop of the Diesel Shop.
Deem to be Lead-based primer/paint. (surface colour = grey)



Photo # 110

Sample # CL – 29 : Floor paint located within the Main Shop of the Diesel Shop.
Deem to be Lead-based primer/paint. (surface colour = yellow)

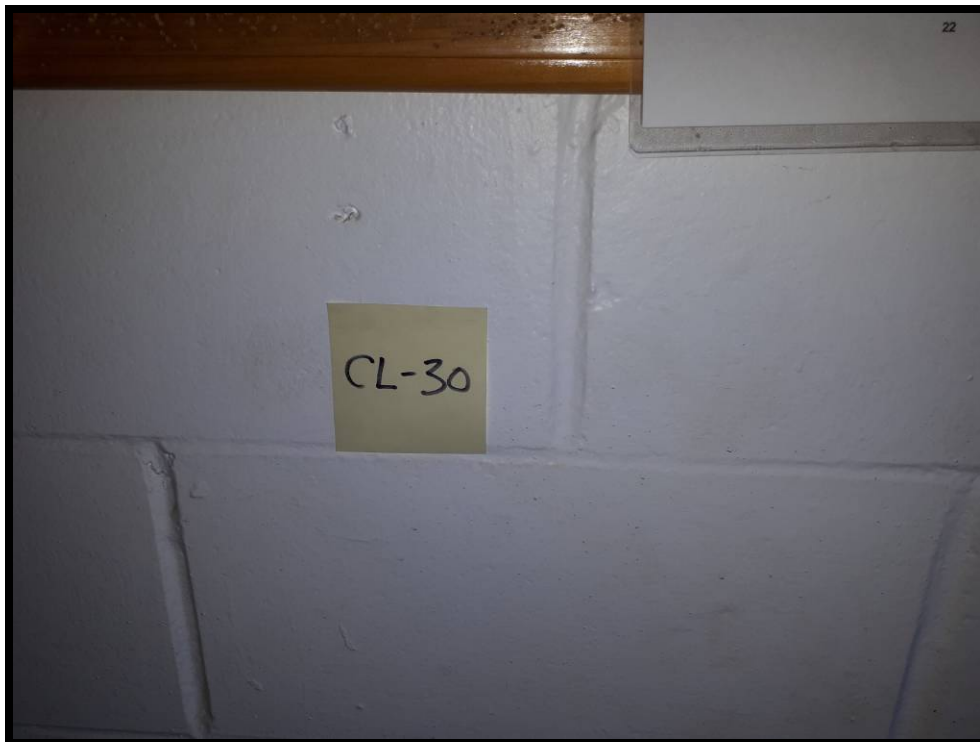


Photo # 111

Sample # CL – 30 : Interior wall paint located within Office #1 of the Yard Office.
Deem to be Low-level paint. (surface colour = white)



Photo # 112

Sample # CL – 31 : Interior wall paint located within Office #2 of the Yard Office.
Deem to be Low-level paint. (surface colour = dark beige)

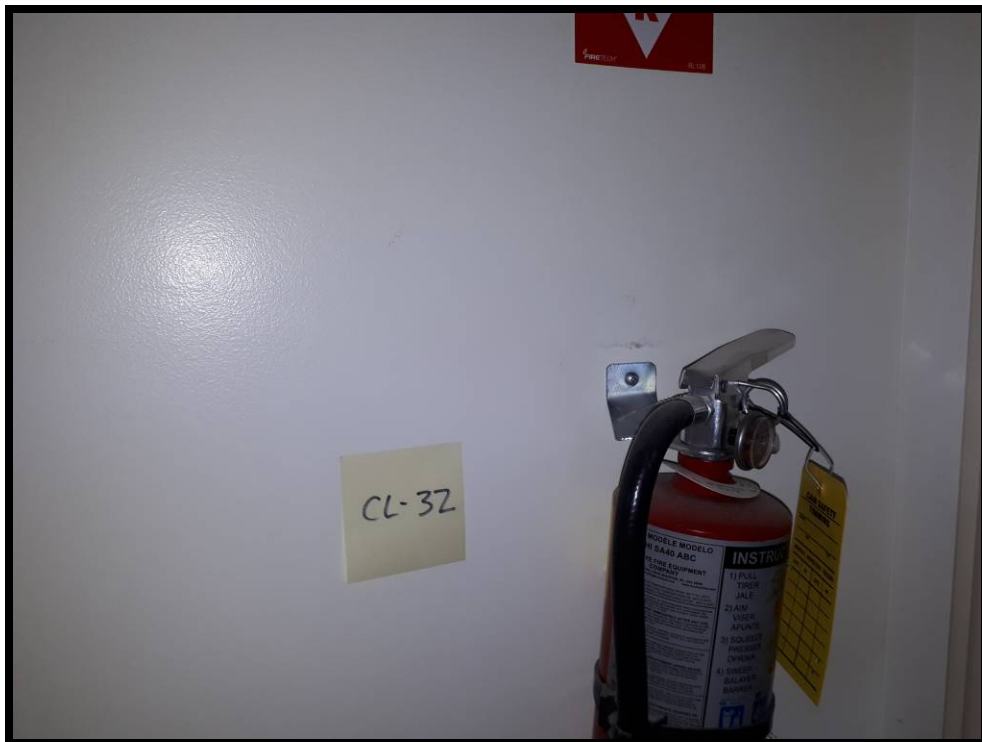


Photo # 113

Sample # CL – 32 : Interior wall paint located within Office #2 of the Yard Office.
Deem to be Low-level paint. (surface colour = off white)



Photo # 114

Sample # CL – 33 : Interior wall paint located within Signals Store of the Yard Office.
Deem to be Low-level paint. (surface colour = blue)

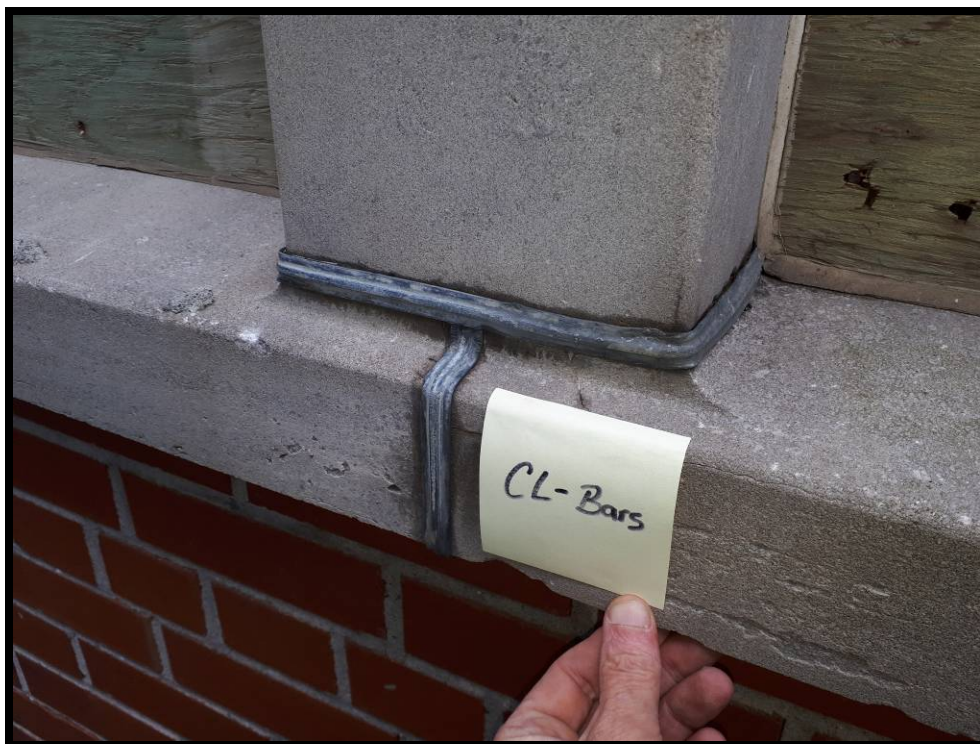


Photo # 115

Lead batten strips on the exterior walls around the windows of the Powerhouse.
Deem to be Lead-based material. (surface colour = grey)

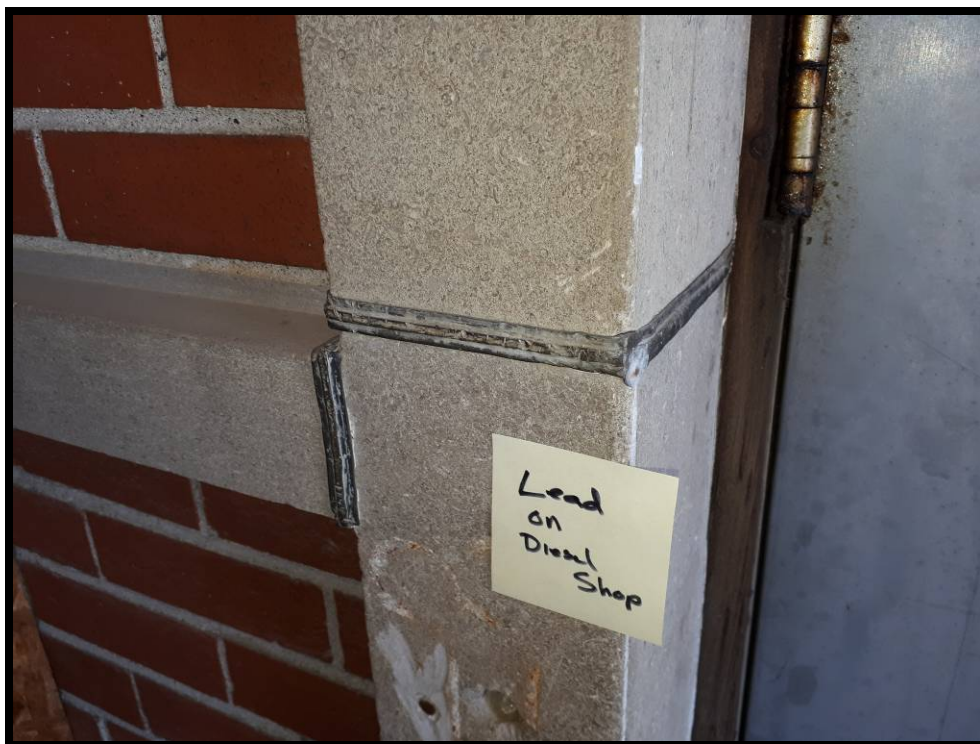


Photo # 116

*Lead batten strips on the exterior walls around the concrete pillars of the Diesel Shop.
Deem to be Lead-based material. (surface colour = grey)*

APPENDIX 'C'

***Fluorescent Light Ballast Photo
&
Thermostatic Control Switch Photo
&
Electrical Transformer Photos***



Photo # 117

*"Emerson" thermostatic control switch located within the Coach Shop.
(no mercury)*



Photo # 118

*"Dimplex" thermostatic control switch located within the Coach Shop.
(no mercury).*



Photo # 119

*"Dimplex" thermostatic control switch located within the Scale Building.
(no mercury)*



Photo # 120

*"STELPRO" thermostatic control switch located within the Rip Track Building.
(no mercury)*

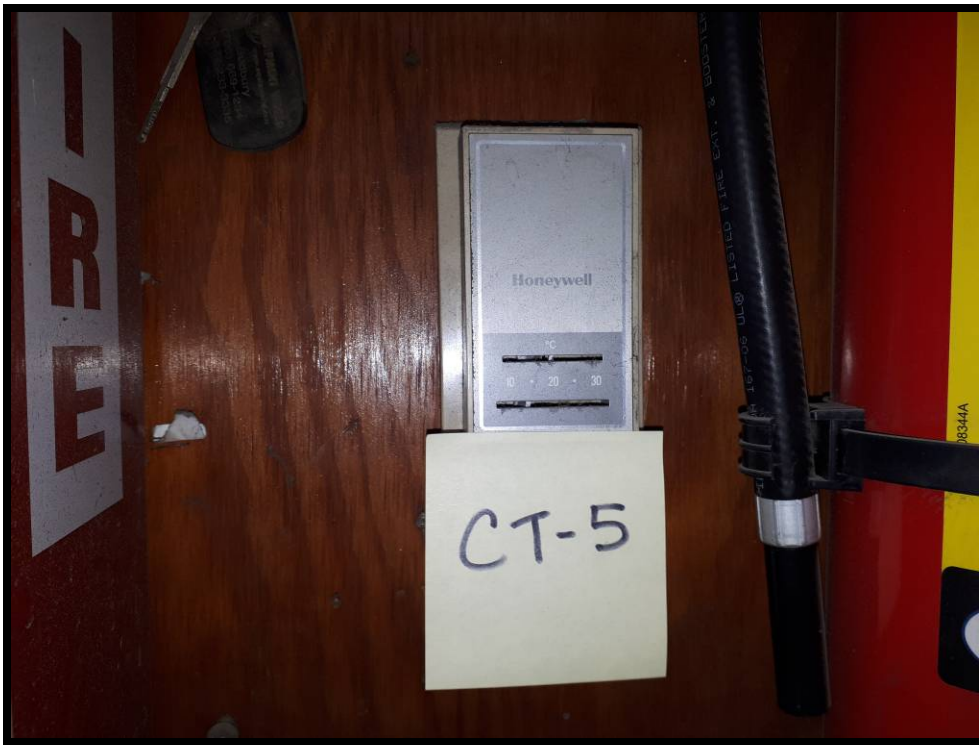


Photo # 121

*"Honeywell" thermostatic control switch located within the Freight Shed.
(contains mercury)*

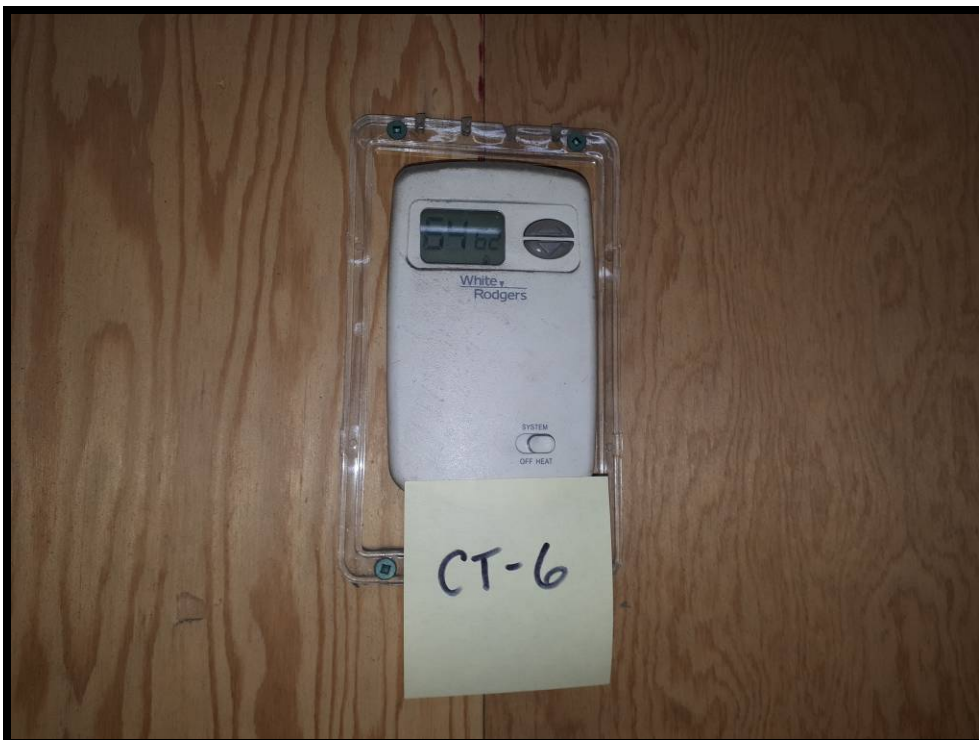


Photo # 122

*"White Rodgers" thermostatic control switch located within the Freight Shed.
(no mercury)*

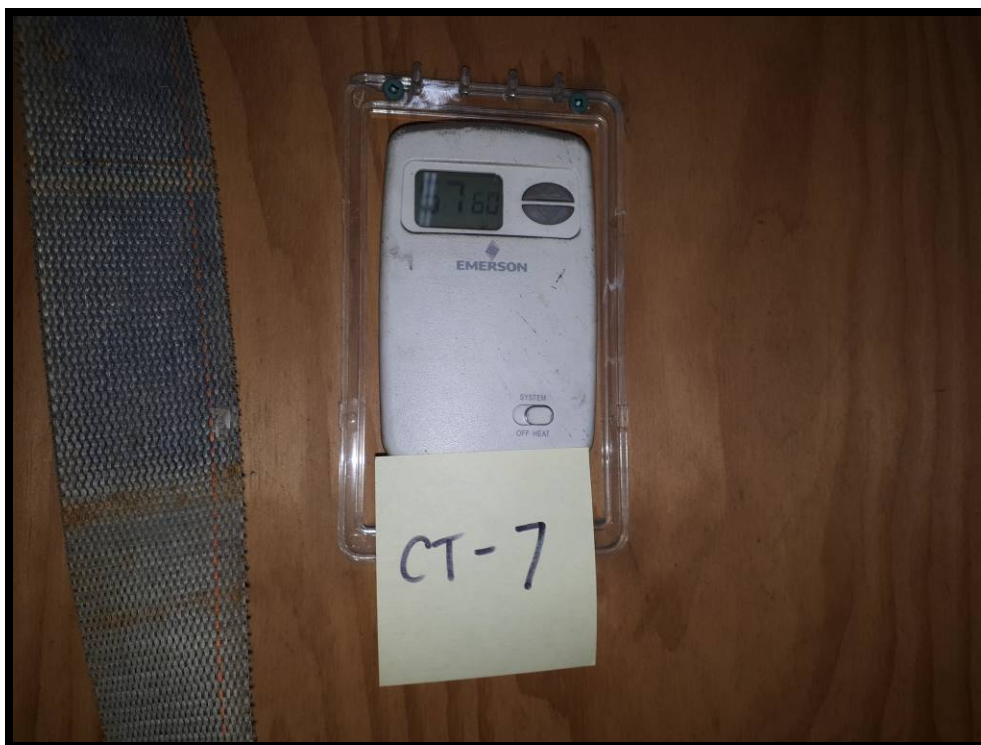


Photo # 123

*"Emerson Rogers" thermostatic control switch located within the Freight Shed.
(no mercury)*



Photo # 124

*"Capel" thermostatic control switch located within the Freight Shed.
(no mercury)*



Photo # 125

*"Honeywell" thermostatic control switch located within the Freight Shed.
(contains mercury)*

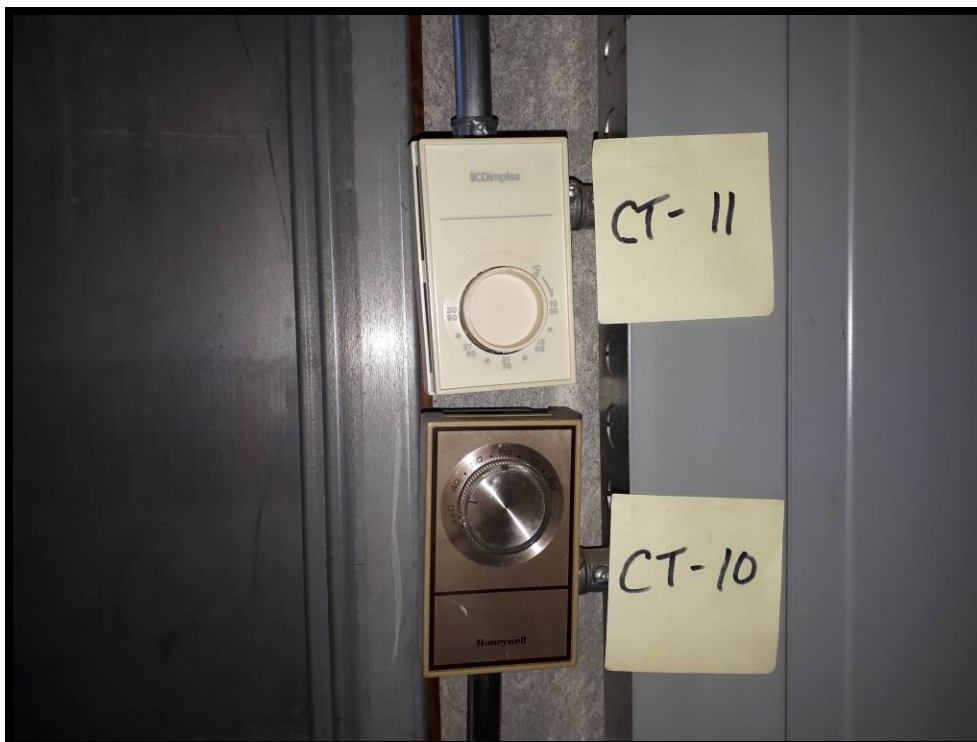


Photo # 126

*Both "Honeywell" and "Dimplex" thermostatic control switch located within the MOW Water Shed.
(no mercury)*

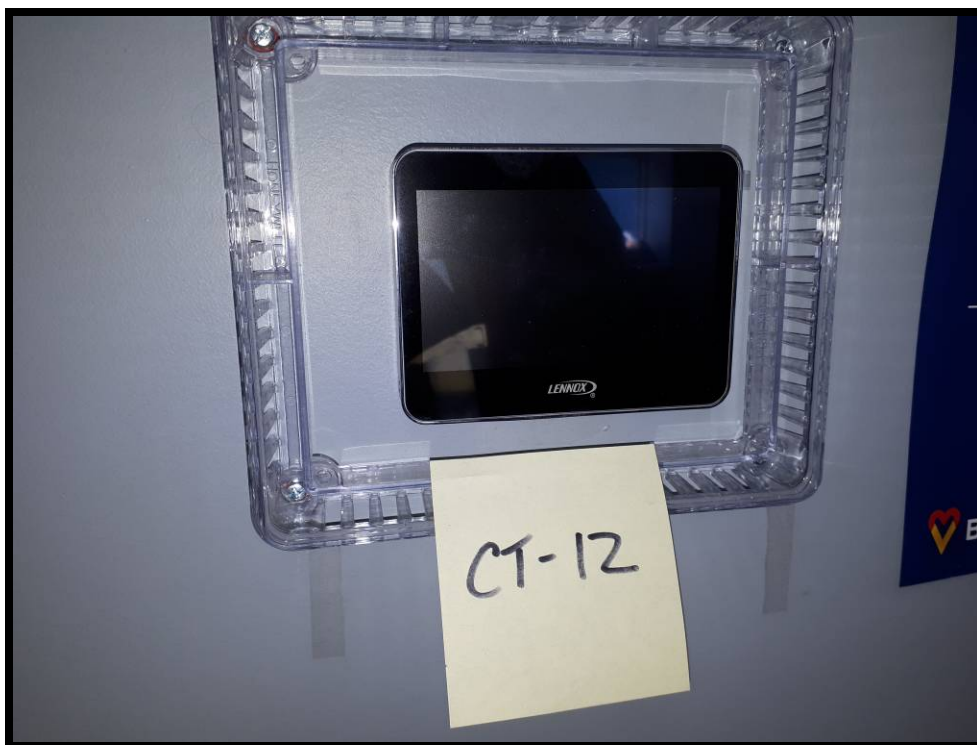


Photo # 127

*"Lennox" thermostatic control switch located within the Diesel Shop.
(no mercury)*



Photo # 128

*"Honeywell" thermostatic control switch located within the Diesel Shop.
(contains mercury)*



Photo # 129

*"White Rogers" thermostatic control switch located within the Diesel Shop.
(no mercury)*



Photo # 130

*"Honeywell" thermostatic control switch located within the Yard Office.
(no mercury)*

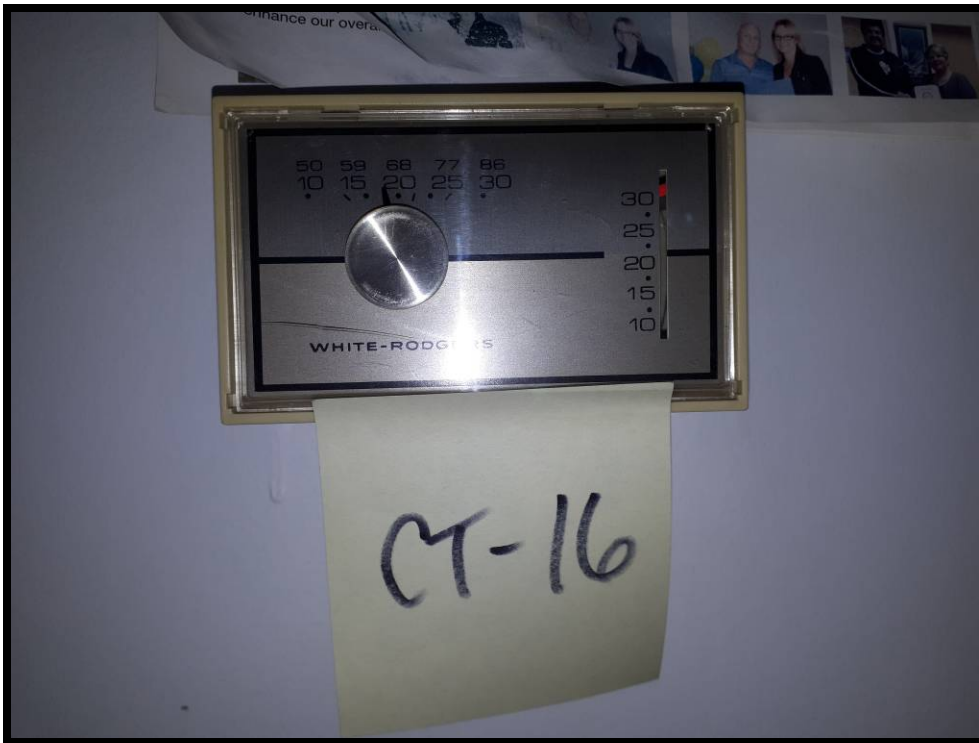


Photo # 131

*"White Rogers" thermostatic control switch located within the Yard Office.
(contains mercury)*



Photo # 132

*"Honeywell" thermostatic control switch located within the Yard Office.
(no mercury)*

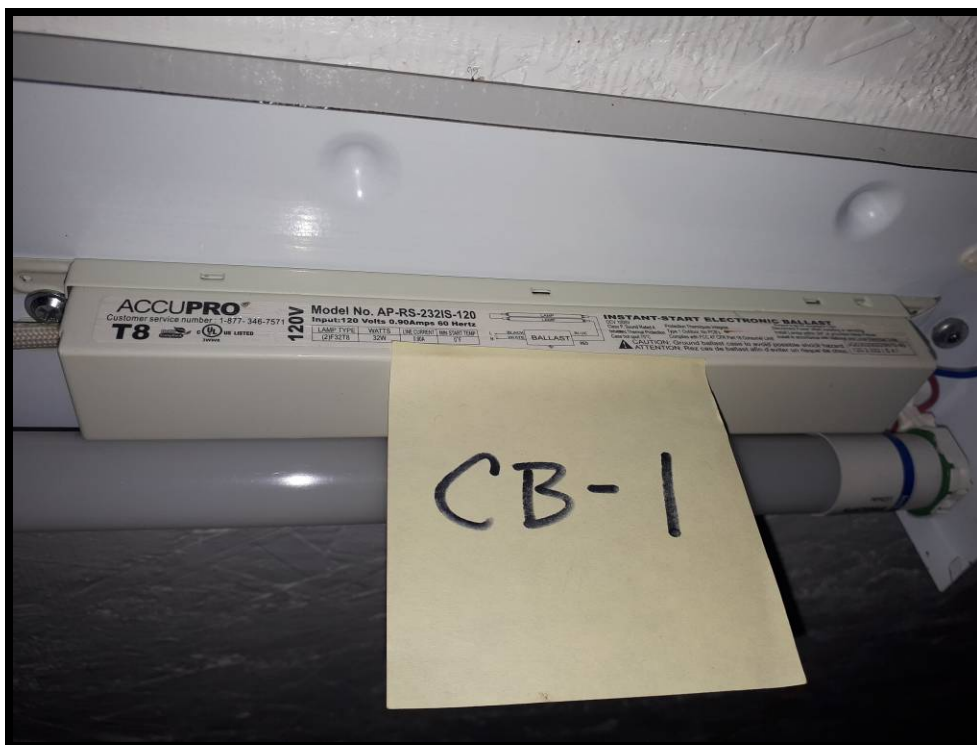


Photo # 133
Typical "ACCUPRO" T8 light ballast located within Watering Shack #2.
(marked as non-PCB)

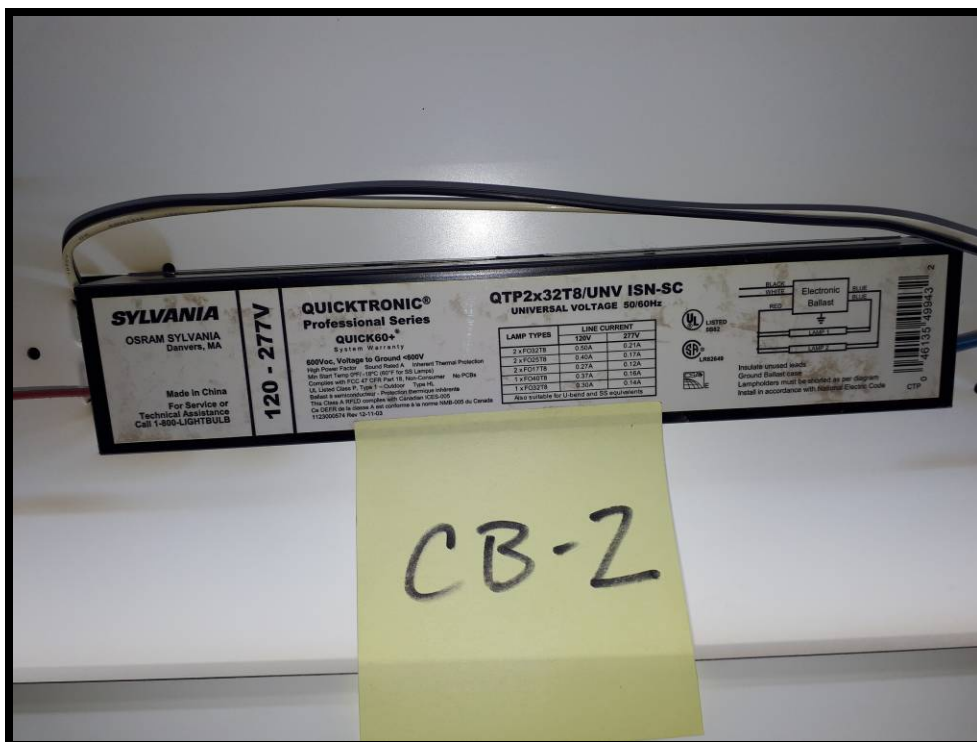


Photo # 134
Typical "Sylvania" T8 light ballast located within the Coach Shop.
(marked as non-PCB)

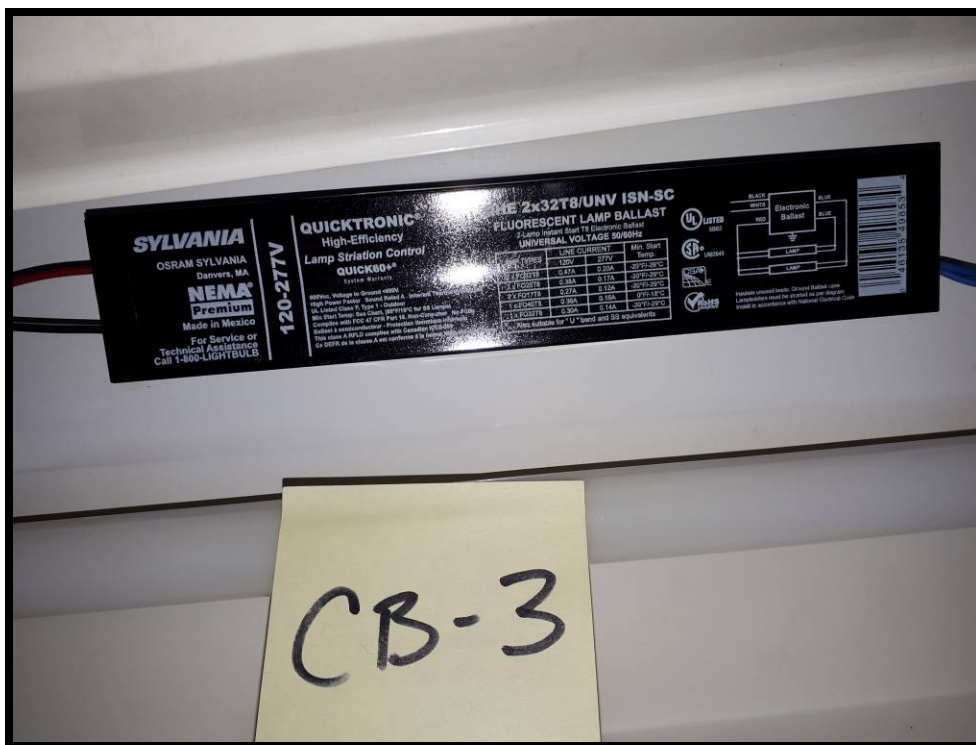


Photo # 135
Typical "Sylvania" T8 light ballast located within the Freight Shed.
(marked as non-PCB)

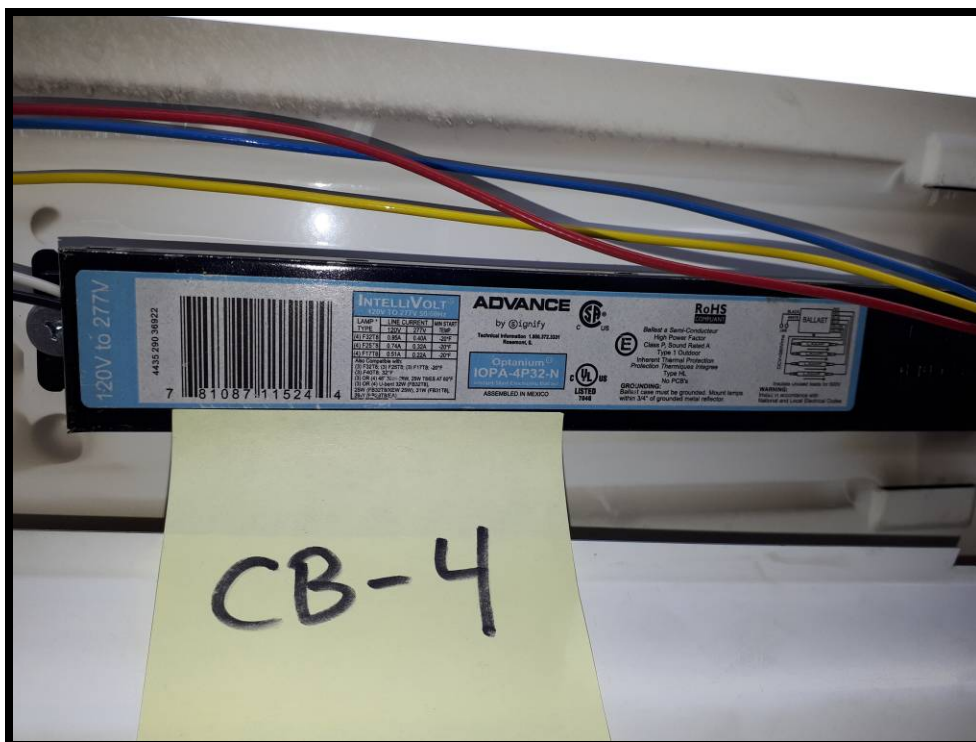


Photo # 136
Typical "Advance" T8 light ballast located within the Diesel Shop.
(marked as non-PCB)



Photo # 137

*“Marcus” electrical transformer located within the mezzanine of the Coach Shop
 (“dry type” model and does not contain PCB’s).*

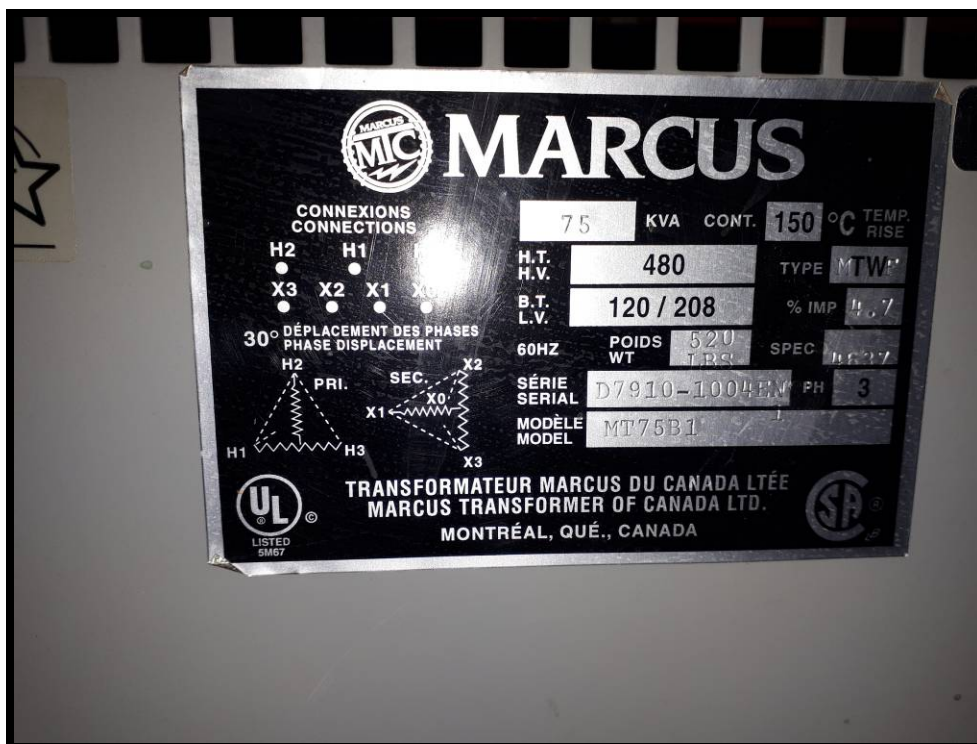


Photo # 138

*“Marcus” electrical transformer located within the mezzanine of the Coach Shop
 (“dry type” model and does not contain PCB’s).*



Photo # 139

“HPS Sentinel G” electrical transformer located within the Powerhouse
 (“dry type” model and does not contain PCB’s).



Photo # 140

“HPS Sentinel G” electrical transformer located within the Powerhouse
 (“dry type” model and does not contain PCB’s).



Photo # 141

Unknown electrical transformer located within the Rip Track Fuel Shed.
("dry type" model and does not contain PCB's)

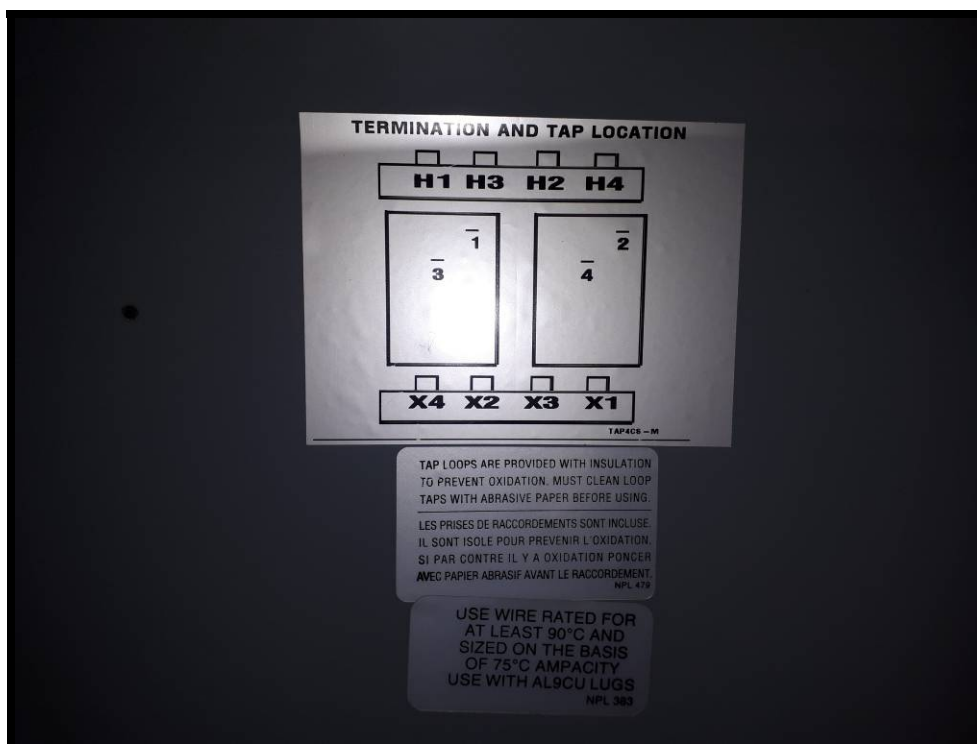


Photo # 142

Unknown electrical transformer located within the Rip Track Fuel Shed.
("dry type" model and does not contain PCB's)



Photo # 143

"BE" electrical transformer located within the Locomotive Fueling Facility.
("dry type" model and does not contain PCB's)



Photo # 144

"BE" electrical transformer located within the Locomotive Fueling Facility.
("dry type" model and does not contain PCB's)



Photo # 145

"Marcus" electrical transformer located within the MOW Water Shed.
("dry type" model and does not contain PCB's)

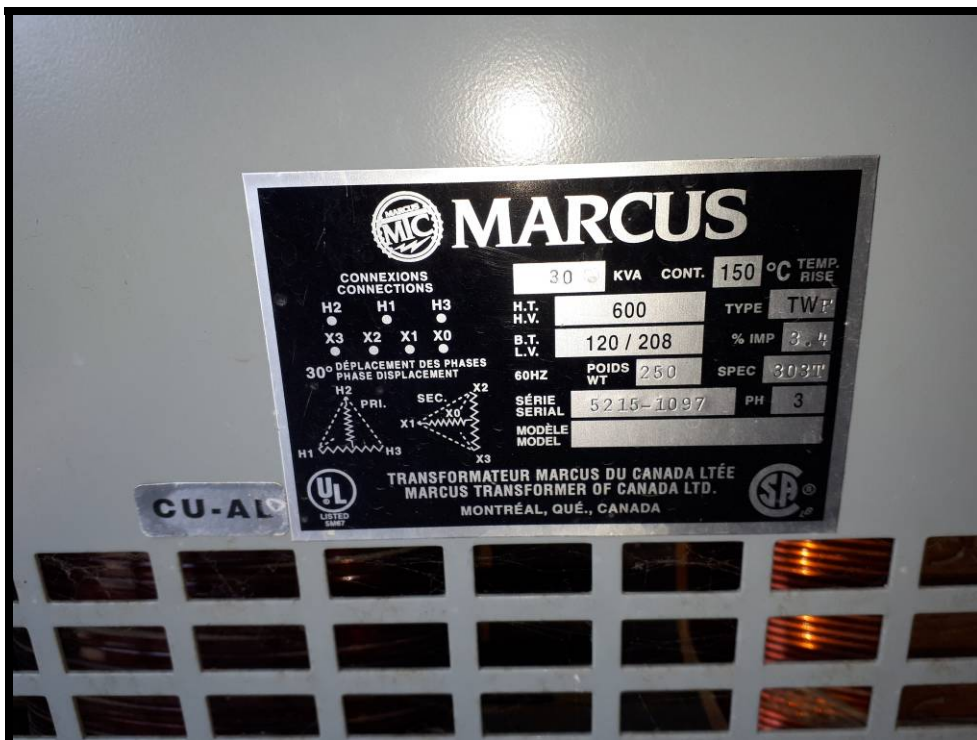


Photo # 146

"Marcus" electrical transformer located within the MOW Water Shed.
("dry type" model and does not contain PCB's)



Photo # 147

"Marcus" electrical transformer located within the Diesel Shop.
("dry type" model and does not contain PCB's)

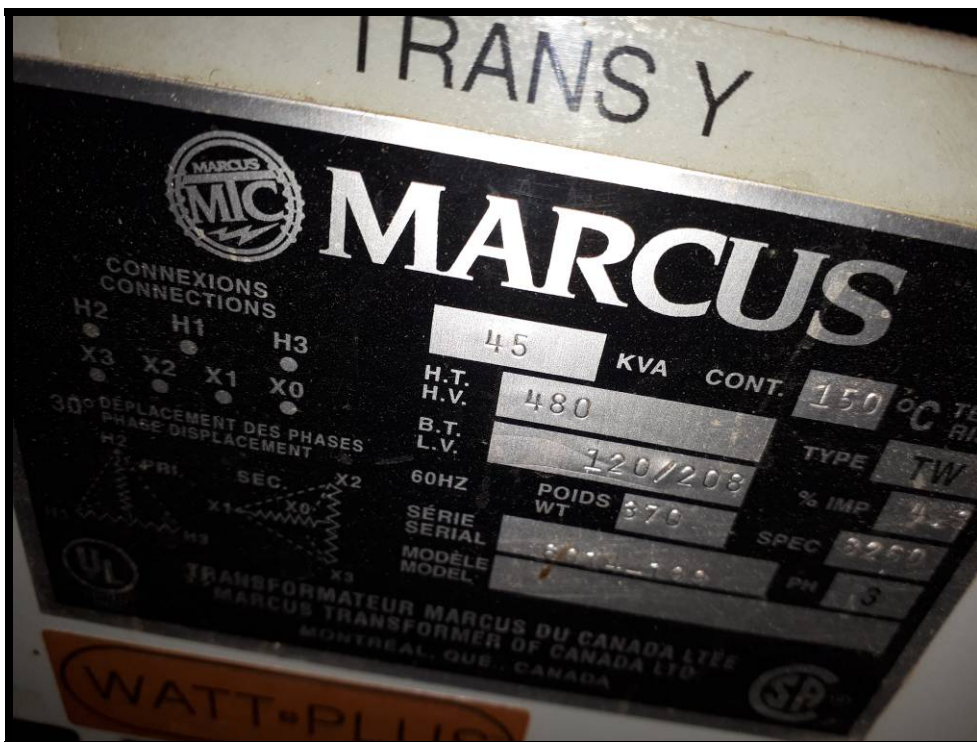


Photo # 148

"Marcus" electrical transformer located within the Diesel Shop.
("dry type" model and does not contain PCB's)



Photo # 149

“Square D” electrical transformer located within the Yard Office.
 (“dry type” model and does not contain PCB’s)



Photo # 150

“Square D” electrical transformer located within the Yard Office.
 (“dry type” model and does not contain PCB’s)



Photo # 151

“Federal Pioneer” electrical transformer located within the Yard Office.
 (“dry type” model and does not contain PCB’s)

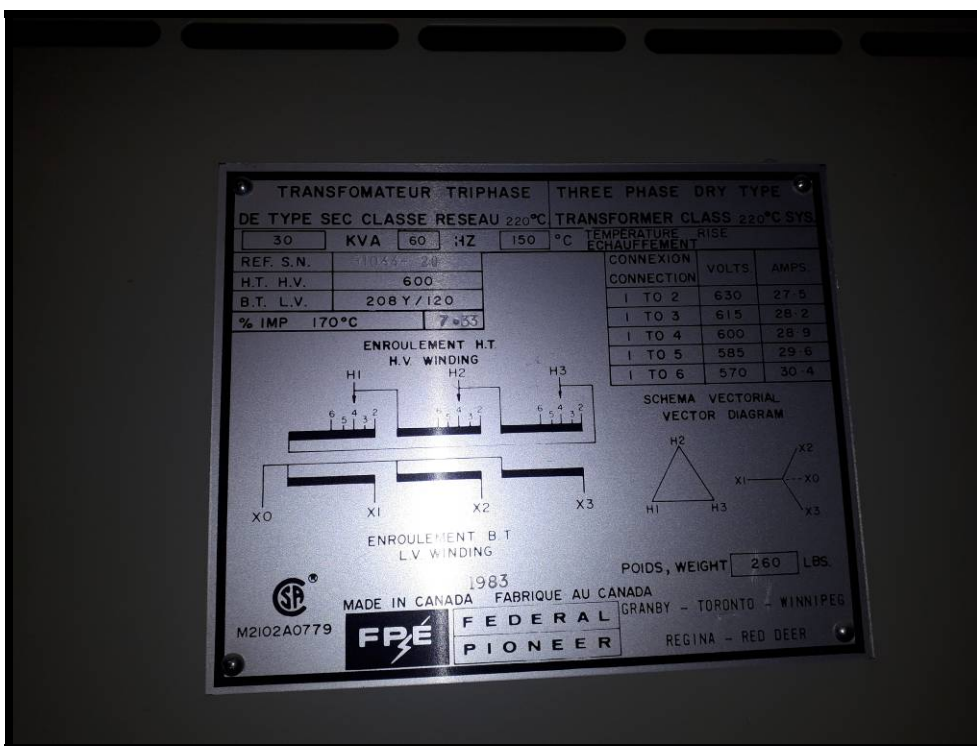


Photo # 152

“Federal Pioneer” electrical transformer located within the Yard Office.
 (“dry type” model and does not contain PCB’s)

APPENDIX 'D'
Building by Building
DSS Findings
&
Floor Plans

BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
Watering Shack #1	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Lead “suspected” to be present as component in solder used in pipe fittings. 	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> None detected
Watering Shack #2	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Fluorescent Light Tubes
Coach Cleaner Storage Shed	<ul style="list-style-type: none"> Asbestos-containing (non-friable) exterior caulking (white) located at wall and metal roof seams. (3% chrysotile). 	<ul style="list-style-type: none"> Interior wall & ceiling paint (white) is classed as Low-level lead paint. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> Fluorescent Light Tubes
Coach Shop	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Wall paint (light blue) is classed as Low-level lead paint. Structural Steel Paint (grey) is classed as Low-level lead paint. Mezzanine Guard Rail Paint (yellow) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> Fluorescent Light Tubes

Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.

BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
Wheel Drop Pit Shelter	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> Fluorescent Light Tubes
Stores	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> None detected
Locomotive Sanding Tower	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Structural Steel Paint (grey) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> None detected
Powerhouse	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Lead batten strips on the exterior windows is classed as Lead-based material. Lead “suspected” to be present as component in solder used in pipe fittings. 	<ul style="list-style-type: none"> Concrete floor / foundation / brick / ceramic tile 	<ul style="list-style-type: none"> Fluorescent Light Tubes
Scale Building	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Exterior wall paint (beige) is classed as Lead-based paint. Exterior door paint (black & grey) is classed as Lead-based paint. Interior wall paint (off white) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> Fluorescent Light Tubes

Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.

BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
<i>Tool Shed</i>	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • Exterior Wall Paint (blue) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • None detected
<i>Storage Shed #1</i>	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • Exterior Wall Paint (blue) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • None detected
<i>MOW Storage Shed</i>	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • Exterior Door Paint (blue) is classed as Low-level lead paint. • Metal clad wall paint is a factory applied finish and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • None detected
<i>Rip Track Fuel Shed</i>	<ul style="list-style-type: none"> • Asbestos-containing (non-friable) window glazing (white). (0.5% chrysotile). 	<ul style="list-style-type: none"> • Exterior Wall Paint (brown) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> • Concrete floor / foundation 	<ul style="list-style-type: none"> • None detected
<i>Rip Track Building</i>	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • Exterior Wall Paint (brown) is classed as Low-level lead paint. • Interior Wall Paint (grey) is classed as Low-level lead paint. • Lead “suspected” to be present as component in solder used in pipe fittings. 	<ul style="list-style-type: none"> • Concrete floor / foundation 	<ul style="list-style-type: none"> • Fluorescent Light Tubes
<i>Outside Repair Track Equipment Sheds (sea cans)</i>	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • Exterior Wall and Roof Paint (blue) is classed as Low-level lead paint. 	<ul style="list-style-type: none"> • None detected 	<ul style="list-style-type: none"> • None detected

Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.

BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
<i>Coach Sewer Dump Storage Shed</i>	<ul style="list-style-type: none"> Asbestos-containing (non-friable) exterior caulking (white) used on wall and soffit electrical penetrations as well as the door frame. (3% chrysotile). 	<ul style="list-style-type: none"> Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> Fluorescent Light Tubes
<i>Freight Shed</i>	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Structural steel primer (red) is classed as Low-level lead paint. Interior wall paint (yellow) – Loading Bay is classed as Low-level lead paint. Basement wall paint (grey) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation / brick / ceramic tile 	<ul style="list-style-type: none"> Fluorescent Light Tubes “Honeywell” wall mounted thermostatic control switches
<i>Locomotive Fueling Facility</i>	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Fuel Tanks and Piping Paint (white) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> None detected
<i>Green Shed</i>	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation 	<ul style="list-style-type: none"> None detected
<i>MOW Water Shed</i>	<ul style="list-style-type: none"> Asbestos-containing (non-friable) interior “Transite” wall panels. (40% chrysotile). 	<ul style="list-style-type: none"> Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Fluorescent Light Tubes

Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.

BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
Diesel Shop	<ul style="list-style-type: none"> Asbestos-containing pipe insulation (aircell) located on the "old" heating lines throughout the basement level of the Office Section and within the Main Shop area. (70% chrysotile). Asbestos-containing pipe insulation (anti-sweat) located on domestic cold water lines throughout the basement level of the Office Section and within the Main Shop area. (0.5% chrysotile). Asbestos-containing pipe insulation (mag block) located old steam heating lines throughout the basement level of the Office Section and within the Main Shop area. (1% chrysotile and 4% Amosite). Asbestos-containing elbow / fitting insulation on both heating & domestic piperuns throughout the basement level of the Office Section and within the Main Shop area. (50% chrysotile). Asbestos-containing "Transite" wall, door and locomotive exhaust hoods observed within the basement level of the Office Section and within the Main Shop area. (40% chrysotile). Built-up roofing system "suspected to contain asbestos" however not sampled due to potential damage to the roofing membrane. 	<ul style="list-style-type: none"> Lead batten strips on the exterior concrete wall columns is classed as Lead-based material. Wall paint (grey) located within the Office Section is classed as Low-level lead paint. Wall paint (light grey) located within the Office Section is classed as Low-level lead paint. Wall & Ceiling paint (beige) located within the basement of Office Section is classed as Lead Based paint. Ceiling paint (yellow) located within the basement of Office Section is classed as Lead Based paint. Wall & Ceiling paint (dark green) located within the basement of Office Section is classed as Lead Based paint. Wall & Ceiling paint (beige) located within the basement of Office Section is classed as Lead-containing paint. Structural steel primer (grey) located throughout the building is classed as Lead Based paint. Floor paint (yellow) located within the Main Shop is classed as Lead Based paint. Lead "suspected" to be present as component in solder used in pipe fittings. Metal clad wall paint is a factory applied finish and is not "suspected" to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation / brick / ceramic tile 	<ul style="list-style-type: none"> Fluorescent Light Tubes "Honeywell" wall mounted thermostatic control switches

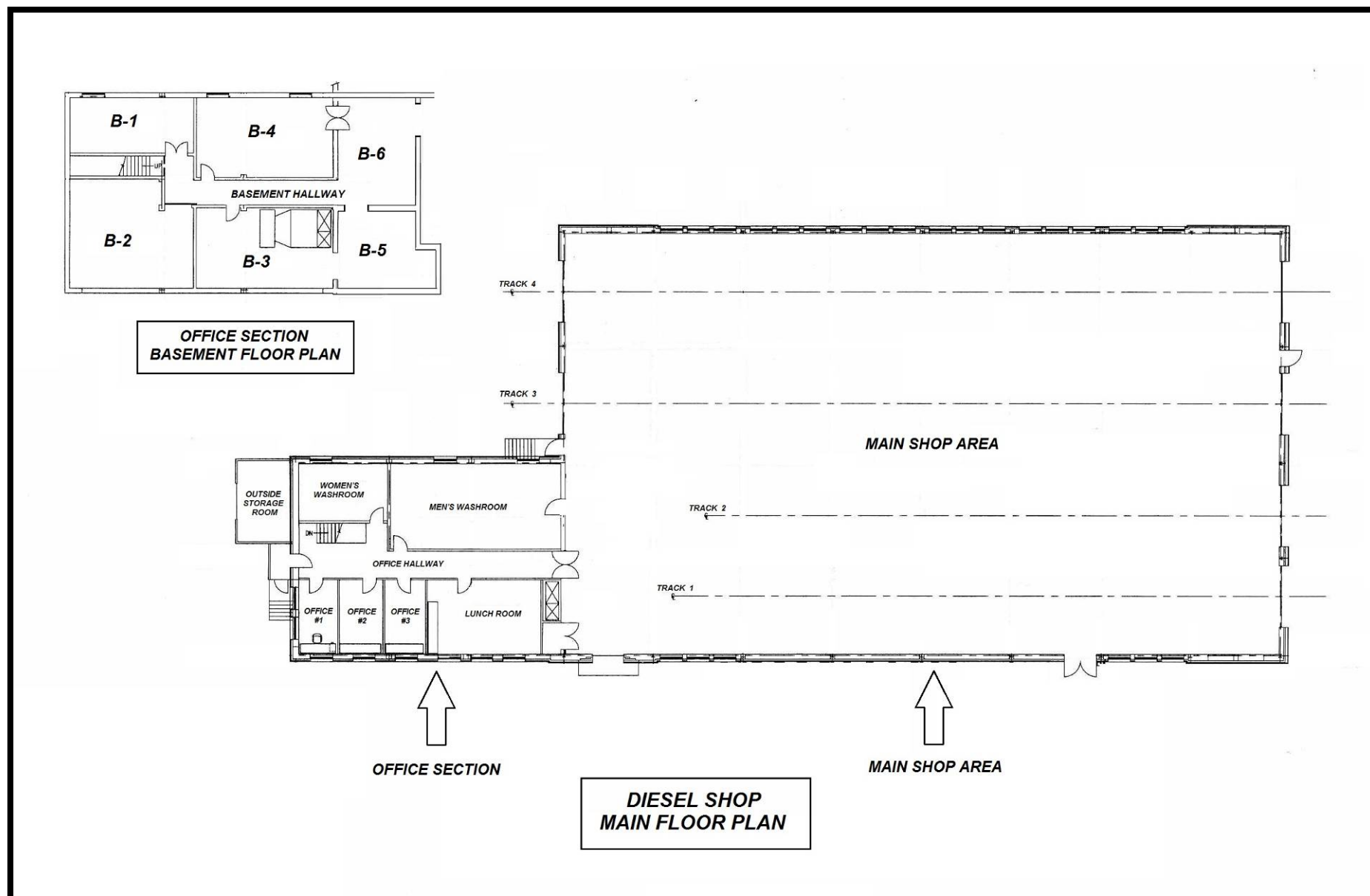
Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.

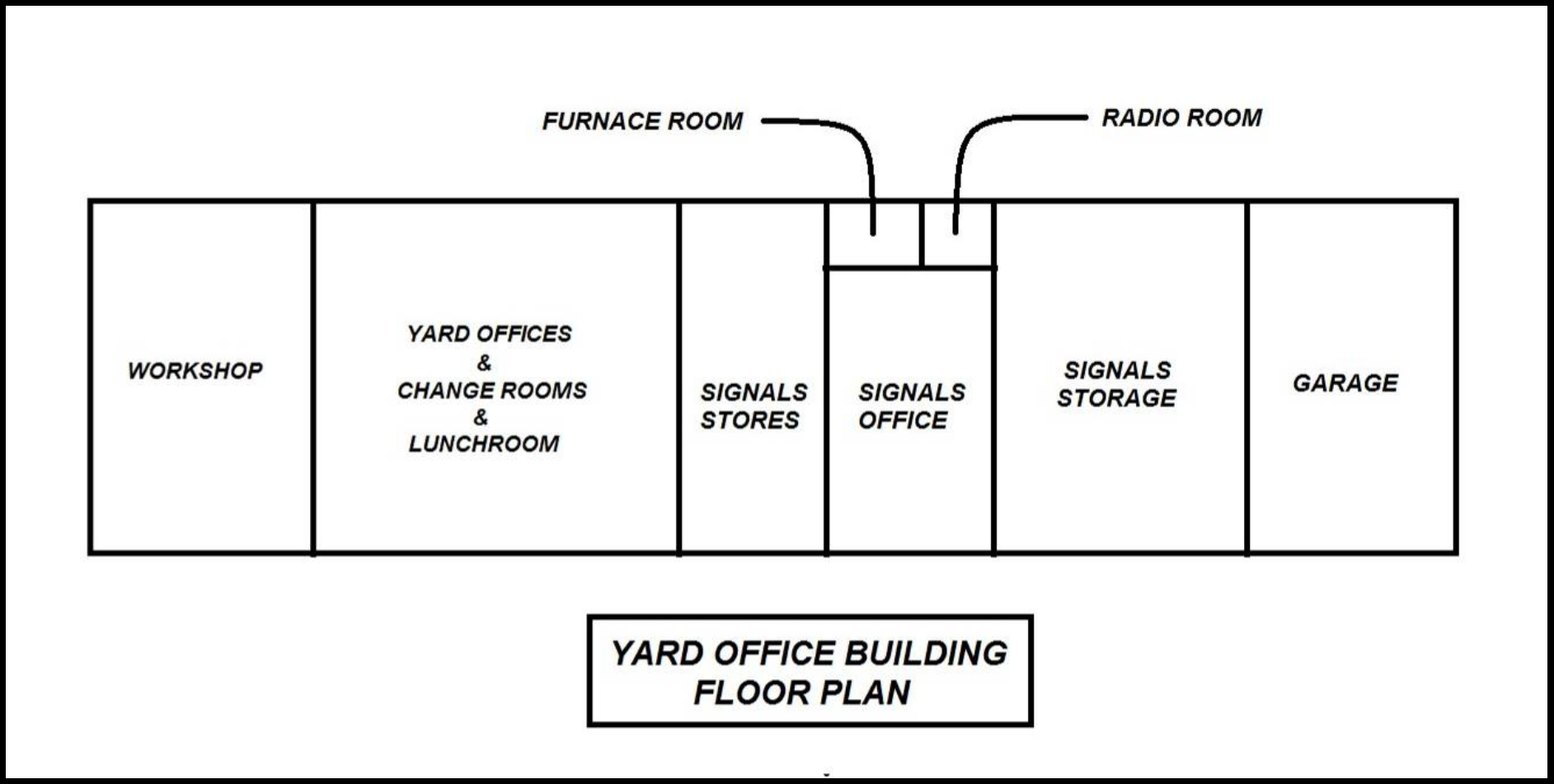
BUILDING by BUILDING DSS FINDINGS

Cochrane Site

Building	Asbestos-Containing Materials	Lead-Containing Materials	Silica	Mercury
Yard Office	<ul style="list-style-type: none"> None detected 	<ul style="list-style-type: none"> Wall paint (white) located within the Office Section is classed as Low-level lead paint. Wall paint (dark beige) located within the Office Section is classed as Low-level lead paint. Wall paint (off white) located within the Office Section is classed as Low-level lead paint. Wall paint (blue) Signals Store (blue) is classed as Low-level lead paint. Lead “suspected” to be present as component in solder used in pipe fittings. Metal clad walls and roof paint are factory applied finishes and are not “suspected” to contain lead based paint. 	<ul style="list-style-type: none"> Concrete floor / foundation / brick / ceramic tile 	<ul style="list-style-type: none"> Fluorescent Light Tubes “White Rogers” wall mounted thermostatic control switches

Note: This table is to be read in conjunction with Thomas Contracting Report TC - 201612, and requires interpretation assistance before use by others.







Environmental Assessment

End of Laurier Avenue, North Bay, Ontario

Prepared for: Alain Tremblay

**Ontario Northland
Transportation Commission**

200A Railway Street
Cochrane, ON P0L 1C0

February 27, 2024

Pinchin File: 337606.001



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Author: Camryn Savage,
Senior Project Technologist
705.280.7944
csavage@pinchin.com

Project Manager: Arinze Uche, PhD, PBIOL
Project Biologist
604.226.3559
auche@pinchin.com

Reviewer: Carolyn Prentice, M.Sc
Senior Project Biologist
778.347.3271
cprentice@pinchin.com

Reviewer: James Neville, MEdes, RPBio, MP
Senior Technical Advisor
604.230.4028
jneville@pinchin.com



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1.0 INTRODUCTION

Ontario Northland Transportation Commission (Client) retained Pinchin Ltd. (Pinchin) to conduct an Environmental Assessment (EA) of the area at the End of Laurier Avenue, North Bay, Ontario (the Site). Pinchin understands that the client is considering demolishing the building on the Site and requires an assessment of any wildlife, nest, or den on and around the building, and a survey of trees that may need to be removed to enable demolition of the building. The EA was completed to facilitate planning of the proposed demolition and applications for ecologically associated approvals under local government, provincial, and federal environmental legislation (Site; Figure 1 and 2).

As part of the EA, Pinchin conducted a field assessment to make observations and collect data about current site features, and conditions within 10-metres (m) of the building, including watercourses (e.g., ditches), vegetation, wildlife and wildlife habitat, invasive species, and species and ecosystems of management concern.

2.0 SCOPE OF PROJECT

Pinchin understands that the proposed demolition of the one-story light metal-framed structure, with dimensions 27 m by 4.7 m, is to include an area with a 10-m radius of the Site building that is to be demolished. Works in that area will include clearing of trees and other vegetation. The Site lot description is provided in Table 1.

Table 1 – Site Location and Description

Civic Address	Lot Size (hectares)	PID	Zoning
End of Laurier Avenue (0 Bay Roadway N)	109.3	4844-050-086-89001	Industrial Area - MR with SPC, O2

3.0 APPROACH

This EA was conducted in two phases: a desktop review of readily available ecological information, followed by a field assessment to verify and fill in potential gaps in information publicly available about the Site.

3.1 Desktop Assessment

A desktop review of the Site was conducted prior to the field assessment to identify mapped watercourses, existing and potential vegetation adjacent to the mapped watercourses, and occurrences of species of management concern with potential to occur within the Site.



The following resources were consulted during the desktop review:

- *Environmental Protection Act*, O. Reg 232/98;
- *Species at Risk Act*, (2002);
- *Ontario Endangered Species Act*, (2007);
- Ministry of Natural Resources and Forestry, Make a Map: Natural Heritage Systems (MNRF, 2024);
- City of North Bay Zoning Portal Web App (2024);
- The Committee on the Status of Endangered Wildlife in Canada (COSEWIC, 2024);
- Google Earth; and
- iNaturalist (2024).

These data sources provided information on aquatic and terrestrial ecosystems, habitat features, general wildlife records, sensitive ecosystems, species at risk occurrences, the provincial and federal status designations of species at risk, and the types of management strategies applicable to local protected areas (e.g., designation as a provincial park). Data were collected from within a 5 km radius of the Site to provide context for existing conditions during the EA, particularly to inform the field assessment study approach. Environmental, survey, and geotechnical documents provided by the client for Pinchin's review were also reviewed, as applicable.

3.2 Field Assessment

The field assessment was conducted on February 6th, 2024, to identify significant environmental features within or near the Site and to ground-truth results of the desktop assessment. The presence and specific characteristics of environmental features determines applicability of regulations, permitting options available, and potential for effects on the proposed demolition plan. The Site was traversed on foot to identify any unmapped watercourses and wetlands, and document vegetation, wildlife, and habitat features. The EA included an area within a 10-m radius from the building, and included the northern, southern, eastern, and western portions of the site.

3.2.1 Timing

Conducting the EA during winter limited the ability to make observations of fish and fish habitat and wildlife and wildlife habitat. The temperature during the assessment was above average for February, with minimal amounts of snow on the ground. As the EA was completed outside the growing season, herbaceous plants and leafless shrubs may not have been identified.



3.2.2 *Fish and Fish Habitat*

The EA included a fish and fish habitat survey of the Site.

3.2.3 *Wildlife and Wildlife Habitat*

Wildlife surveys conducted within the Site during the EA consisted of:

- Documentation of wildlife habitat features, such as wildlife, trees, travel corridors, and abundance of coarse woody debris and leaf litter;
- Assessment of bird nesting habitat and visual surveys of trees; and
- Documentation of wildlife observations or sign, such as scat, tracks or dens.

3.2.4 *Vegetation*

The vegetation assessment of the Site consisted of documentation of the dominant plant species and habitat types, and a Tree Survey of the area that consisted of a tree inventory, by count and species, of timber greater than 200 millimetres (mm) in diameter at breast height (DBH) or 1.4 m above the ground surface.

3.2.5 *Species of Management Concern*

The field assessment included availability of potentially suitable habitat to meet one or more of the life requisites of species of management concern documented in the desktop assessment. Likelihood was assessed qualitatively based on the ability of the habitat to meet one or more life requisites of each species, based on provincial and federal management documents, peer-reviewed literature, and professional opinion from observations in similar habitats.

4.0 **REGULATORY FRAMEWORK**

This section provides regulatory context for ecologically based environmental features applicable to the study area.

4.1 **Aquatic Habitat**

Fish and fish habitat are protected under the federal *Fisheries Act*. The *Act* was significantly updated in 2019 and now prohibits serious harm to both fish and fish habitat and provides definitions more protective than previously. Additional resources provided by Fisheries and Oceans Canada include a searchable permit database, guidance, and information on enforcement.

Per the *Fisheries Act*, Section 2 definitions, “fish includes (a) parts of fish, (b) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (c) the eggs, sperm,



spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals". Section 34.4 states that, without permission, "No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish." The Fisheries Act Section 35(1) has increased protection by defining harm to fish to include the "harmful alteration, disruption or destruction of fish habitat". Additional details are included in the Act and are anticipated to be forthcoming in associated policies and codes.

The Fish and Fish Habitat Protection Policy Statement (DFO 2019) states that riparian areas provide important habitat for fish. Any changes in and about watercourses that provide fish habitat require consultation with Fisheries and Oceans Canada in the form of a Project Review that may identify the need for a Project Authorization.

4.2 Wildlife and Wildlife Habitat

Environment and Climate Change Canada (ECCC) affords protection to breeding birds and species of management concern through the federal *Migratory Birds Convention Act* (MBCA). The MBCA prohibits harassment, destruction, or harm to migratory birds, their nest and nest contents, by imposing timing constraints on works. The MBCA also prohibits depositing or allowing a substance that is harmful to migratory birds into waters or an area frequented by migratory birds. Migratory birds include waterfowl and their allies (loons, grebes, rails, shorebirds, herons, gulls and terns), cranes, and most insectivorous birds.

Some other wildlife protected by the *Ontario Endangered Species Act* (ESA), 2007 include: Eastern Massasauga Rattlesnake (*Sistrurus catenatus catenatus*), Piping Plover (*Charadrius melodus*), Woodland Caribou (*Rangifer tarandus caribou*), Eastern Loggerhead Shrike (*Lanius ludovicianus*), and Eastern Whip-poor-will (*Antrostomus vociferus*).

4.3 Species of Management Concern

Legislation applicable to species of management concern includes the *Species at Risk Act* (SARA) and the *Ontario Endangered Species Act* (ESA), 2007. SARA applies primarily to Species at Risk (listed as Endangered, Threatened, or Extirpated under Schedule 1) where they occur on federal lands; however, aquatic species (i.e., fish) are protected wherever they occur. Under section 9(1) of the Ontario ESA, no person shall, kill, harm, harass, capture, possess or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered, or threatened species.

5.0 RESULTS

The desktop assessment was completed prior to the field assessment to identify any watercourse or significant ecological land features. The field assessment was conducted on February 6th, 2024, at a



temperature of approximately zero degrees Celsius (0 °C), with overcast sky and low wind. The area had slight snow cover, which obscured some wildlife and wildlife habitat observations, but aided wildlife track observations.

Sections below present results of the desktop and field assessment.

5.1 Desktop Assessment

The desktop assessment was completed prior to the field assessment to identify any watercourse or significant ecological land features. The desktop assessment provided information relating to a conservation and recreation area adjacent to the property, and on surrounding industrial properties in the vicinity of the area. A provincially significant wetland southeast of the property boundary is protected by the North-Bay-Mattawa Conservation Authorities (Figure 2).

The City of North Bay zoning WebMap revealed that the Site is located in an industrial area, approximately 20 m away from residential areas and approximately 80 m away from park zone (green space).

5.2 Field Assessment

5.2.1 Fish and Fish Habitat

The field assessment identified no fish or fish habitat on the Site or connection to off-Site fish habitat. The closest edge of the provincially significant wetland mentioned above is approximately 100 m southeast of the Site. Furthermore, there was a lake-like feature, approximately 300 m southeast of the Site, that appeared to drain into Jennings Lake and Pasmore Lake.

5.2.2 Wildlife and Wildlife Habitat

The field assessment revealed no notable wildlife habitat, though there were signs of occasional wildlife use. Tracks suspected to be those of white-tailed deer (*Odocoileus virginianus*) were observed in the snow, and raccoon (*Procyon lotor*) tracks were identified (Appendix I, Photo 1 and 2). There was evidence of about six inactive nests of the tent caterpillar moth (*Malacosoma* sp.) in balsam poplar trees outside the 10-m radius of the building (Appendix I, Photo 1 and 2).

Assessment of the building marked for demolition revealed no signs of wildlife habitat, and no birds or bird nests were found in or around the area. Generally, there were no prevalent signs of wildlife using the Site, however, Pinchin noted that the Site is located North-west of a provincially significant wetland which could be a potential habitat for amphibians, shore birds and other wildlife.



There were no signs or observations of habitat potentially suitable for species of management concern during Site investigations.

5.2.3 Vegetation

The vegetation within the 10-m radius consisted primarily of native trees, shrubs, and other plants. The Site presented characteristics of a fresh, moist poplar, and white birch mixed woodland ecosite. The dominant tree species identified on the property included white birch (*Betula papyrifera*), balsam poplar (*Populus balsamifera*) and red maple (*Acer rubrum*). Approximately 35 trees were counted throughout the assessment, within the 10-m radius that met the projects proposed criteria (Appendix I, Photos 4 - 9). Table 2 presents the count and approximate diameter at breast height (DBH) of trees observed on the Site. The DBH refers to the tree diameter measured at 4.5 feet above the ground.

Table 2 – Tree Species, Abundance, Size and Conditions

Species		Abundance (Count)	Average DBH (mm)	Tree Condition
Common Name	Scientific Name			
White Birch	<i>Betula papyrifera</i>	15	145-185	Healthy
Balsam Poplar	<i>Populus balsamifera</i>	15	339	Healthy
Red Maple	<i>Acer rubrum</i>	6	219	Healthy

The majority of the counted trees did not meet the criteria of timber that be greater than 200 mm in diameter at a height of 1.4 m above the ground surface. The entire area had a total of one balsam poplar out of fifteen with a DBH of 339 mm, and one red maple out of six with a DBH of 219 mm.

6.0 DISCUSSION

There were no aquatic or riparian habitat, and no notable wildlife habitat identified on or near the site that could raise concerns with the demolition. Pinchin noted the property boundaries are adjacent to the Laurier Woods Conservation Area, a heavily populated recreation trail used by residents in the area. The Laurier Woods Conservation Area is protected under the Conservation Area Regulation 125, R.R.O. 1990. and encompasses a provincially significant wetland. The aquatic habitats observed near the Site were at least 100 m away and, as such, Pinchin anticipates demolition effects will be very negligible if any at all.

Two trees over 200 mm DBH (a balsam poplar of 339 mm DBH, and a red maple of 210 mm DBH) stood within 10 m of the building marked for demolition. Those trees are to be protected and all impacts on the crown and roots should be avoided. If impacts cannot be avoided, adequate compensation should be considered.



The City of North Bay Noise By-Law No. 2014-53 prevents unnecessary noise in residential areas and the Amended By-Law No. 2023-27 requires a permit for noise. Care is to be taken during the demolition to avoid noise pollution.

7.0 RECOMMENDATIONS

Pinchin recommends the following:

Wildlife

- Keep an environmental monitor present during the clearing and demolition phase;
- Do not clear vegetation during the bird breeding window (i.e., April 15 to August 31 – Zone C3 & C4) without a bird nesting survey being first conducted by a biologist approximately, about three-to-five days before clearing;
- Do not harm any wildlife observed during demolition or clearing;
- If an animal is injured accidentally, take it to the nearest wildlife rescue facility and notify the environmental monitor; and
- Cover any excavation as soon as possible to avoid animal entrapment.

Vegetation

- Do not disturb ground during rainfall;
- Set up tree-protection fencing to delineate the two trees of concern;
- If protected trees, mentioned above, are to be cut, replacement planting with native plant species at a ratio of one tree per three square metres is required;
- Clear minimal vegetation clearing and include only that required for access and demolition activities;
- Seed cleared areas, including the demolished building footprint, with native grass mix as soon as possible; and
- Leave the cleared vegetation in the area to protect the soil from erosion and form wildlife habitat.

Demolition

- Carry out demolition only during a dry period with no significant rainfall (i.e., no events more than 25 mm of rainfall within 24 hours);
- Contact the North-Bay-Mattawa Conservation Authority prior to the demolition date;
- Obtain a noise permit or an exemption as required;



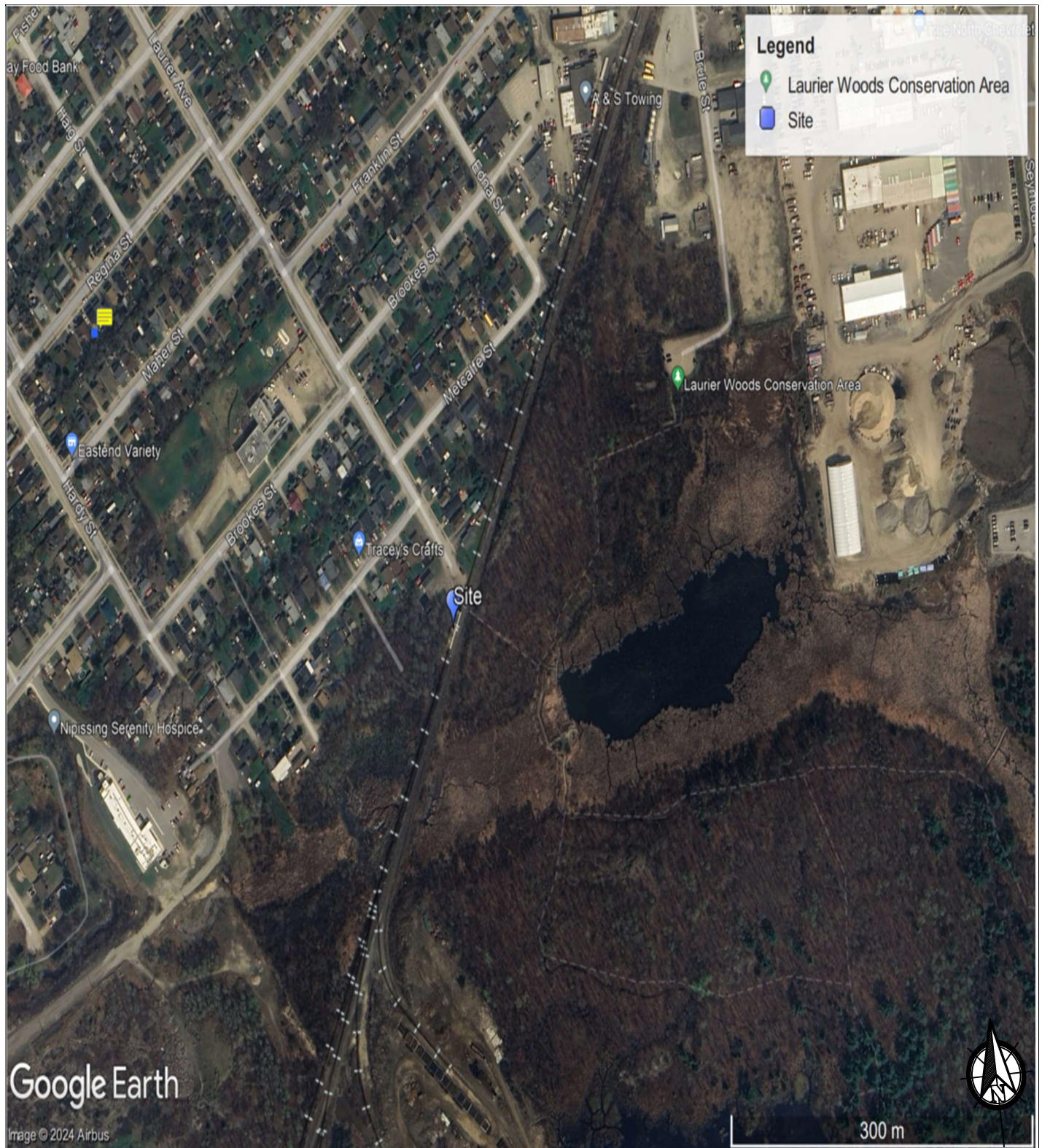
10.0 TERMS AND LIMITATIONS

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

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Template: Master Environmental Assessment Report, ENS, June 6, 2022

Figure 1
Site Location




	CLIENT NAME: ONTARIO NORTHLAND TRANSPORTATION COMMISSION					
	PROJECT NAME: ENVIRONMENT ASSESSMENT REPORT					
	LOCATION: END OF LAURIER AVENUE, NORTH BAY, ONTARIO					
	TITLE: SITE LOCATION					
DATE:	PROJECT #:	IMAGE SOURCE:	DRAWN BY:	CHECKED BY:	FIGURE NO.:	
FEBRUARY 2024	337606.001	GOOGLE EARTH	CS	CP	1	

Figure 2
Ecological Land Classification

ECOLOGICAL LAND CLASSIFICATION

Legend

- Residential Area
- Industrial Area
- Laurier Woods Conservation Area
- Laurier Woods secondary access
- Provincial Significant Wetland
- Site

Google Earth

Image © 2024 Airbus

100 m



CLIENT NAME:		ONTARIO NORTHLAND TRANSPORTATION COMMISSION				
PROJECT NAME:		ENVIRONMENT ASSESSMENT REPORT				
LOCATION:		END OF LAURIER AVENUE, NORTH BAY, ONTARIO				
TITLE:		ECOLOGICAL LAND CLASSIFICATION				
DATE:	PROJECT #:	IMAGE SOURCE:	DRAWN BY:	CHECKED BY:	FIGURE NO.:	
FEBRUARY 2024	337606.001	GOOGLE EARTH	CS	CP	2	



APPENDIX I
Site Photos



Photograph 1: Suspected White-tailed deer track. Photograph taken February 6, 2024.



Photograph 2: Suspected raccoon track. Photograph taken February 6, 2024.



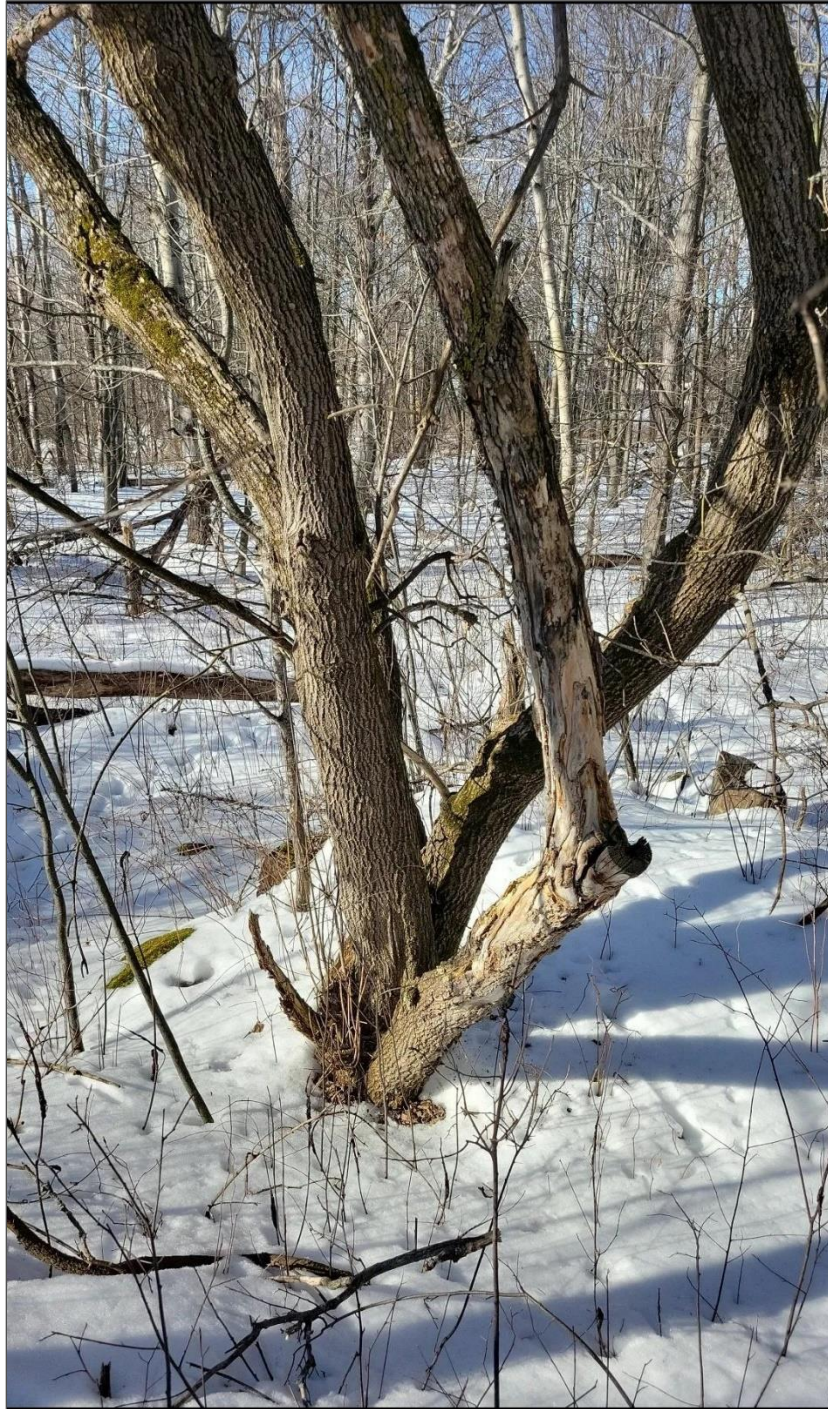
Photograph 3: Inactive tent caterpillar moth nests. Photograph taken February 6, 2024.



Photograph 4: Trembling Aspen at the east side of the Site. Photograph taken February 6, 2024.



Photograph 5: West side of the Site showing some vegetation and the building marked for demolition.
Photograph taken February 6, 2024.



Photograph 6: Green ash tree. Photograph taken February 6, 2024.



Photograph 7: Curly duck plant. Photograph taken February 6, 2024.



Photograph 8: Common lilac on the east side of the Site. Photograph taken February 6, 2024.

Adequate: in relation to procedure, plan, material, device, object or thing, means

- a) Sufficient for both its intended use and actual use, and
- b) Sufficient to protect a worker from occupational illness or occupational injury

Competent Person: a person who is,

- a) Qualified because of knowledge, training, and experience to organize the work and its performance
- b) Is familiar with the Occupational Health and Safety Act and/or the Canada Labour Code and the regulations that apply to the work, and
- c) Has knowledge of any potential or actual danger to health or safety in the workplace

Construction: includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project, but does not include any work or undertaking in a mine.

Constructor: a person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by himself/herself or by more than one employer.

Contractor: any person or entity contracted to provide service to ONTC.

Employer: a person who employs one more workers or contracts for the services of one or more workers and includes a contractor or subcontractor who performs work or supplies services and a contractor or subcontractor who undertakes with an owner, constructor, contractor or subcontractor, to perform work or supply services.

Prescribed: means prescribed by a regulation made under the Occupational Health and Safety Act or Canada Labour Code

Project: a construction project whether public or private, including

- a) The construction of a building, bridge, structure, industrial establishment, mining plant, shaft, tunnel, caisson, trench, excavation, highway, railway, street, runway, parking lot, cofferdam, conduit, sewer, watermain, service connection, telegraph, telephone or electrical cable, pipeline, duct or well, or any combination thereof,
- b) The moving of a building or structure, and
- c) Any work or undertaking, or any lands or appurtenances, used in connection with construction

Project Administrator: a person who leads/coordinates work project.

Regulation: the regulations made under the Occupational Health and Safety Act or the Canada Labour Code.

MATERIAL REQUIRED

Contractor Safety Checklist and Orientation Form
ONTC Contractors Safety Requirements & Liability Release Form
Project Hazard Assessment
Contractor Orientation Training Package

PROCEDURE

Before Contractors/Subcontractors begin work/project ensure the following is adhered to:

- Ensure that all contractors on the property are compliant and current with all legislative licensing requirements.
- Ensure that all contractors provide a valid WSIB Clearance Certificate and/or liability insurance before beginning any work on ONTC property.
- Provide orientation training to contractors prior to commencement of work.
- Ensure contractors understand their contractual obligations under this standard.
- Provide a designated ONTC contact person to ensure contractors compliance to ONTC policies, procedures and standards through ongoing work site inspections, communications and reported safety concerns.
- Ensure that application of this standard is delivered and used consistently throughout ONTC operations.

Responsibilities

The responsibility of health and safety can become complex when contractors/subcontractors are procured to conduct work for any ONTC project.

To ensure clarity of responsibility, where a contractor is hired to conduct work for ONTC and the Provincial Occupational Health and Safety Act applies in respect of that work, the Contractor will be deemed the Constructor.

No ONTC employee will be assigned to work on the same project as the general contractor, unless there is an agreement between the Contractor and ONTC determining the contractor as the Constructor.

Where a project requires more than one employer, ONTC may enter into an agreement before the commencement of the project to determine control over the project identifying who will be the constructor.

Employer

The employer is responsible to:

- Ensure contractors, employees, supervisors and managers are adequately aware of the provisions and requirements of the POL Purchasing Policy and Procedure.

- Ensure that contractors, subcontractors and project worker companies are adequately prequalified in accordance with the Contractor Safety Prequalification Form for large projects or projects where the combined value of the project exceeds \$50,000.00 and where ONTC is the Constructor.
- Ensure contractors, subcontractors and project worker companies have agreed with and endorsed in writing, the terms of the Contractor Health and Safety Responsibility Agreement.
- Properly implement and periodically audit the contractor prequalification and safety procedure.
- Ensure that authorized staff comply within the Contractor Prequalification and Safety Procedure.
- Discipline and or remove from the authorized contractors list any contractor that fails to comply with this procedure.

Procurement

The Procurement Department is responsible to:

- Conduct prequalification in conjunction with the Project Administrator for consultants and service providers and ensure the completion of the Contractor Health and Safety Responsibility Agreement and the Contractor Prequalification Form (as required) before any work is initiated on any of the ONTC properties;
- Maintain a list of all service agreements, memorandums of understanding, service contracts; and
- Obtain a current copy of WSIB Clearance Certificates and Insurance Certificate for pre-qualified consultants and service providers.

Project Administrator

The Project Administrator is responsible to:

- Contract a pre-qualified contractor;
- Ensure contractors, subcontractors and project worker companies are prequalified in accordance with the Contractor Safety Prequalification Form;
- Ensure the contractor completes the Contractor Orientation Training with the contractor's workers prior to the beginning of a project;
- Complete with the contractor and maintain the Project Hazard Assessment;
- Request applicable training records, certificates, licenses, and written procedures and measures from the contractor as required;
- Ensure the Contractor Health and Safety Responsibility Agreement is completed by the contractor prior to the beginning of work;
- Conduct Safety briefings with the contractors prior to the work beginning and as required by the project;
- Periodically view the work areas to ensure compliance with the Act, associated regulations and the relevant ONTC safety procedures;
- Respond to safety concerns from contractors and others impacted by a project; and
- Ensure all relevant ONTC safety procedures are being implemented at the project.
- Ensure all contractor has provided SDS for all hazardous product used and that the SDS are readily available if stored on ONTC property.

Where a Contractor is hired to perform work for ONTC and the work is subject to the requirements of the Occupational Health and Safety Act, the Contractor will be the Constructor. The aforementioned duties or similar must be completed by the contractor.

Note: the Contractor – Constructor will be required to utilize their own prequalification and safety contract documents for any and all subcontractors hired to perform work on the project.

Contractors

Contractors are responsible to:

- Employ competent Supervisors and Workers;
- Comply with the Contractor Prequalification and Safety Procedure;
- Complete the ONTC Project Hazard Assessment and Contractor Health and Safety Responsibility Agreement;
- Furnish the ONTC with hard copies of applicable training records, certificates, licenses and written procedures and measures as required;
- Ensure that the Contractor Safety Checklist and Orientation form completed and signed;
- Notify the project administrator of any questions or concerns with Contractor Prequalification and Safety Policies;
- Notify the project administrator of any contraventions of the Act or ONTC's Procedures; and
- Participate in required safety training
- Provide WSIB documentation confirming the contractor is registered and their account is in good standing.
- Provide proof of liability insurance.
- Have all products used in their process evaluated by ONTC personnel prior to the products being brought onto ONTC property. This will be done through the evaluation of Safety Data Sheets (SDS) provided by the contractor/subcontractor.
- Ensure copies of all SDS are readily available.
- Immediately inform designated ONTC contact person of any changes in their process or products used in their operation.
- Prior to entering ONTC property, register with Security, appropriate supervisor or designated ONTC contact person for direction.
- Ensure that all equipment and vehicles are properly maintained and meet prescribed safety standards for that piece of equipment, e.g. no loose pins on backhoe extensions or arms, safety pins and safety features are working properly.

Workplace/Policy Health and Safety Committees

The WHSC/PHSC are responsible to:

- Participate in the development and review of the contractor subcontractor policy, procedure, and applicable forms; and
- Provide a resource to employees in regards to the contractor subcontractor policy, procedure, and applicable forms

Manager Health and Safety

The Manager of Health and Safety is responsible to:

- Provide assistance if needed with prequalification process of contractors as requires by the Purchasing Department and/or the Project Administrator;
- Approve/disapprove exceptions of the Contractor Safety Prequalification process.
- Facilitate in the development and review of the contractor subcontractor policy, procedure, and applicable forms; and
- Apply, audit and discipline compliance specific to the contractor subcontractor policy, procedure, and applicable forms.

TRAINING:

ONTC is responsible to ensure that those ONTC personnel who have duties and responsibilities to act under this procedure are adequately trained in these duties as applicable.

The training shall reinforce the hazard control hierarchy as follows:

- **Elimination:** activities or practices that involve the complete removal of the hazard from the worker in the workplace.
- **Substitution:** involves the replacement of high hazard task or workplace circumstance with a lower hazard task or workplace circumstance.
- **Engineering Controls:** involve creating and using designed infrastructure or equipment to minimize a hazard.
- **Administrative Controls:** involves creating protocols, involving stated obligations and prohibitions that change the way people work.
 - **Warning Signs:** are postings and placards that communicate the presence of a hazard as well as hazard control directives.
- **Personal Protective Equipment (PPE):** involves the use of gear that is worn by the worker to create a barrier between the hazard and the worker. PPE can include gloves, respirators, hard hats, safety glasses, high-visibility clothing, and safety footwear.

The Manager of Health and Safety will ensure that the training is refreshed at adequate frequency.

Retraining will be provided for all authorized workers or contractors whenever there is a change in their job assignments, a change in condition, equipment or processes that present a new hazard, or when there is a change in the Contractor Safety Prequalification Process.

Additional retraining shall also be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in the worker's knowledge or use of the Contractor Safety Prequalification Process. The Project Hazard Assessment will be updated to add any additional hazards and corresponding controls, as required.

PROCEDURE:

General Information

The Project Administrator shall establish practices so that all contractors, subcontractors, or contract workers perform their work in a safe and effective manner and meet all the requirements of the Occupational Health and Safety Act, the Canada Labour Code and the Construction Regulations. The Project Administrator must be adequately familiar with all applicable laws, codes and regulations and be capable of applying them.

Where ONTC retains a “Contractor to act as Constructor”

- ONTC is not responsible for ensuring that the requirements of the applicable regulations are met for contractor activities on site, where ONTC has retained a “Contractor who fulfils the role of the constructor” who fully controls all work at a construction site. (Pre-award, ONTC should ask what a candidate Contractor-Constructor company does to prequalify contractors (and subcontractors) to determine how the Constructor proposes to maintain adequate safety on site. Once the project is awarded, ONTC should not involve itself in the project in any way that could be interpreted as “material control” that is strictly the Constructor’s duty).
- When ONTC retains the “contractor to act as constructor” for construction project: The ONTC does not have the health and safety responsibilities for this type of construction project, as long as the constructor completely controls all work and the ONTC workers are not intermingling in the project and ONTC is not controlling the project in any way.

ONTC will ensure that all contractors/subcontractors are properly trained, ensure that contractors/subcontractors are monitored and that requirements for safety are observed by the contractor, and that procedures for safe conduct of the work are in place and known to contractor employees.

The Project Administrator shall direct the contractor in completion of all applicable documentation, as described by the Contractor Safety Prequalification Procedure. The Project Administrator shall ensure that the constructor maintains full responsibility for safety on the particular job.

If the work is Non-Construction work where ONTC is acting as the “Employer”

The Project Administrator shall review the ONTC’s applicable policies and procedures with the contractors/subcontractors. It is recommended that all contractor/subcontractor workers undergo this training orientation, but it is mandatory that at least the contractor’s supervisor or site superintendent receive the training orientation and then have a method to ensure that this information is passed on to all employees under their direct control. Please note that the requirement of “Lead Employer” must be fulfilled if the work is Confined Space Entry work.

It is the responsibility of the Project Administrator to ensure that the contractor is aware that project specific training is to be conducted.

The Project Hazard Assessment form shall be completed by the Project Administrator and reviewed with all contractors prior to commencement of work.

Contractors/subcontractors that regularly perform services at ONTC must complete a Contractor Training Orientation on annual basis or whenever there is a change in personnel or applicable and safety conditions which may affect the contractor's/subcontractors workers. For project contracts, a Hazard Safety Assessment form will be completed each time the contractor performs a new project, unless the same contract personnel had performed project work of a similar nature within the previous 12 months.

Prequalification

Pre-Qualification of a contractor is designed to ensure that the contractor has:

- Appropriate current and sufficient insurance;
- WSIB Coverage;
- An appropriate and compliant health and safety policy;
- Competent supervisors; and
- A program to completely undertake and control the construction work being conducted at ONTC

When pre-qualifying a contractor who will not act as "Constructor" ONTC shall determine whether the contractor has the specific policies, procedures, training and supervision to perform the job safely and in compliance with all provisions of the OHSA and the applicable regulations. Use the Contractor Safety Prequalification form to fulfill this policy obligation.

If the procurement department is completing the prequalification procedure, input may be required from the Manager of Health and Safety or the Project Administrator if there are specific requirements for a project.

The following items must be submitted by the contractor for prequalification:

- Certificates of insurance – general liability insurance (Minor projects \$2,000,000 minimum, Major Projects \$5,000,000 minimum)
- WSIB Safety Record – submit a copy for the last 3 years or equivalent accident/injury data.
- Current Clearance certificate – Confirms contractor has met reporting and payment obligations to WSIB. ONTC will be required to receive a copy of the clearance certificate every 2 months and before the final payment on the contract has been made.
- Contractor's Health and Safety Policy.
- Past Environmental, Health and Safety Records – a copy for the last 2 years.
- Training and Certification Records – Contractor must provide documentation verifying all workers have received the necessary safety training required for the specific job.
- Hazardous material list – the contractor must submit a list of all hazardous materials that will be brought onto ONTC property.
- ONTC may require a separate work plan detailing higher hazard work activity or any tasks that may tend to produce adverse.

The Project Administrator will ensure that the Contractor Health and Safety Responsibility Agreement has been completed by the contractor.

The Project Administrator will ensure current copies of insurance, and WSIB clearance certificates, and annual safety reviews are maintained for pre-qualified contractors.

Contractors that have already been pre-qualified should be reasonably favoured and used for OTNC projects.

Project Management

In all circumstances except where a Contractor has formally taken on the role of Constructor, the Project Administrator is responsible for the health and safety on the project, and must halt the project if there are health and safety concerns. The Project Administrator must maintain communication with the contractor throughout the project.

The Project Administrator will be responsible to ensure that all health and safety documentation for the project is completed and maintained.

The Project Administrator is responsible to obtain an ONTC Project Assessment Folder and complete it with Contractor prior to any work beginning.

- Signed Contractor Safety Responsibility Agreement;
- Certificates of Insurance – General Liability Insurance;
- WSIB Safety Record;
- Current Clearance Certificate;
- Contractor's health and safety policy and procedures applicable to the work being conducted;
- Training, licensing and certification records;
- Hazardous materials list and current SDS for material brought onto ONTC property and already onsite that will be used during or encountered during the project;
- Completed Contractor Orientation Training Records;
- And copies of any applicable ONTC procedures that have been reviewed; and
- Completed Contractor Prequalification form.

The Project Hazard Assessment form must be filed once the project has been completed and made available for review if required for auditing purposes.

The Project Administrator must ensure that the Contractor Orientation Training is completed for all workers on the project.

On-Site Safety – All ONTC safety procedures (Fall protection, Confined Space Entry, Lockout/Tagout, Ladder Safety, WHMIS, Personal Protection Equipment, Respiratory Protection, etc.) apply at all construction on ONTC projects.

The Project Administrator shall review all applicable safety procedures with contractors/subcontractors at the site. Copies of the ONTC procedures can be obtained through the Project Administrator.

The Project Administrator will ensure that daily safety briefings are conducted prior to the beginning of each project work day, as well as regularly inspect the work site as the project requires.

If the contractor or subcontractor has a question or concern regarding safety on the project, they should speak to the Project Administrator or their immediate supervisor.

All contractor(s) or subcontractor(s) supervisors must report to the Project Administrator:

- Any unsafe actions or conditions,
- Contraventions of the OHSA/CLC and regulations or any ONTC safety procedure, or
- Existence of any hazard at the project.

Any incident (first aid, near miss, etc.) on the project must be immediately reported to the Project Administrator.

NOTE: Workers and their supervisors shall be held accountable for violations of health and safety rules, regulations, and procedures. Disciplinary action, where necessary, will be dictated by the ONTC disciplinary procedure and will be based on the merits of the specific case.

APPENDICES/EDUCATIONAL MATERIAL:

- Contractor Safety Prequalification Form
- Contractor health and Safety Responsibility Agreement
- Contractor Orientation Training Checklist
- Project Hazard Assessment

REFERENCES:

- Ontario Occupational Health and Safety Act R.S.O 1990
- O.Reg 213/91 Construction Projects
- Canada Labour Code R.S.C., 1985 c L-2
- Canada Occupational Health and Safety Regulations SOR/86-304
- Contractors Subcontractors Safety NBRHC OH&S4-017



Photograph 9: Trees and shrubs on the north side of the Site. Photograph taken February 6, 2024.

CANADIAN RAIL OPERATING RULES

May 9, 2022 Version

The official version of the CROR, in its entirety, applies to all railway companies. Certain railway companies may not, as a practical matter, perform each and every activity that the CROR governs. In this case, for greater employee clarity, the railway company's rule book must contain the rules that govern activities they do perform.

Those rules shown as OPTIONAL may be adopted by a railway.

When used by a railway, they will not indicate the word "OPTIONAL" in that company's version of the CROR.

It is optional to print the CROR and Protection of Track Units and Track Work together as one book or separately as CROR book 1 and CROR book 2.

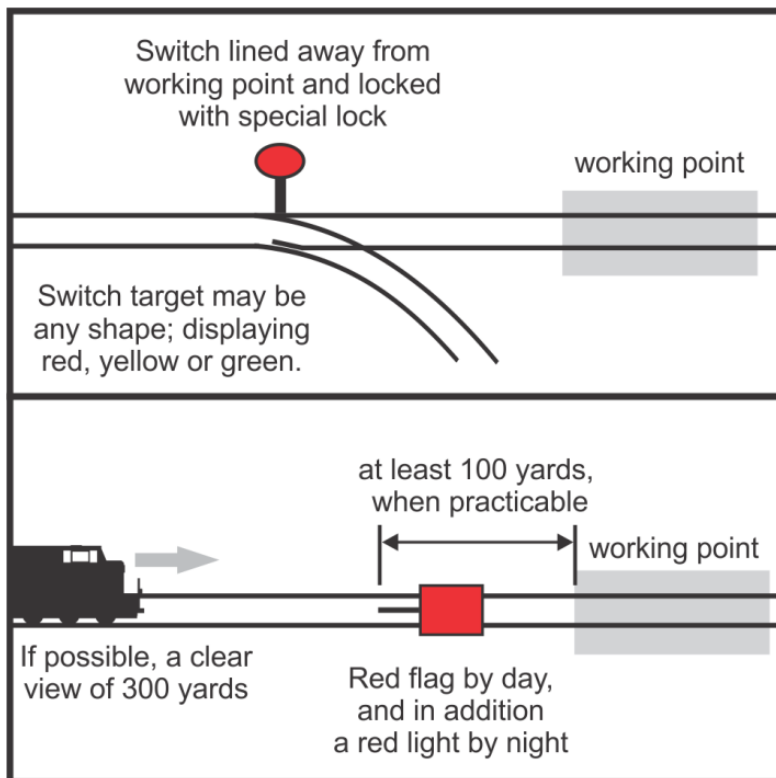
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GENERAL NOTICE

Safety and a willingness to obey the rules are of the first importance in the performance of duty. If in doubt, the safe course must be taken.

DEFINITIONS

For the purpose of these rules and special instructions, the following definitions apply:

ADVANCE SIGNAL

A fixed signal used in connection with one or more signals to govern the approach of a movement to such signal.

ADVANCED TRAIN DISPATCHING SYSTEM

Train control technologies that provide enhancements for protecting overlapping authorities with ability to provide signal indications into protected track.

AUTOMATIC BLOCK SIGNAL SYSTEM (ABS)

A series of consecutive blocks in which ABS rules apply.

BLOCK

A length of track of defined limits, the use of which by a movement is governed by block signals.

BLOCK SIGNAL

A fixed signal at the entrance to a block to govern a movement entering or using that block.

CAUTIONARY LIMITS

That portion of the main track or main tracks within limits defined by cautionary limit sign(s).

CENTRALIZED TRAFFIC CONTROL SYSTEM (CTC)

A system in which CTC rules apply.

CONTROLLED BLOCK

A block in CTC between consecutive controlled locations or points.

CONTROLLED SIGNAL

A CTC block signal which is capable of displaying a Stop indication until requested to display a less restrictive indication by the RTC.

CONTROLLED LOCATION

A location in CTC the limits of which are defined by opposing controlled signals.

CONTROLLED POINT

A signal location in CTC consisting of controlled signal(s) in one direction only.

CROSSOVER

A track joining adjacent main tracks, or a main track and another track.

DAILY OPERATING BULLETIN (DOB)

A document containing applicable information from each GBO, instructions and other information requiring compliance within limits indicated in special instructions.

ELECTRONIC COMMUNICATIONS METHOD (ECM)

An electronic method for transmission and cancellation of authorities, instructions or information.

ENGINE

A locomotive(s) operated from a single control or a cab control car, used in train, transfer or yard service.

ENGINE IN YARD SERVICE

An engine with or without cars utilized exclusively in switching, marshalling, humping, trimming and industrial switching.

EQUIPMENT

One or more engines and/or cars which can be handled on their own wheels in a movement.

EXCLUSIVE TOP

A TOP that provides exclusive occupancy of the track to one foreman. No more than two track units can operate within the limits of an Exclusive TOP.

EXCLUSIVE TRACK UNIT SPEED

When protected by an Exclusive TOP, it is a speed that permits a track unit to stop short of a switch not properly lined.

Track units handling equipment must not exceed the lesser of; authorized freight, passenger or temporary speed restrictions. The delivery method for temporary speed restrictions will be indicated in special instructions.

FIXED SIGNAL

A signal or sign at a fixed location indicating a condition affecting the operation of a movement.

FOLLOW-UP TOP

A TOP issued within limits of a movement(s) that has passed or will be identified by the foreman as having passed the foreman's location.

GENERAL BULLETIN ORDER(S) (GBO)

Instructions regarding track condition restrictions and other information that affect the safety and operation of a movement.

GRAVITY DROP

Releasing stationary equipment and permitting it to roll under its own momentum.

HEAVY GRADE

A portion of a track 2 miles in length or greater, with an average grade greater than 1.0%, and less than or equal to 1.8%.

HIGH RISK LOCATION

A track, or portion of a track, other than a main track, subdivision track, or siding; identified in special instructions, on which unattended equipment requires the application of Rule 112(a).

HUMPING

Pushing equipment at a regulated speed then releasing it under its own momentum, in an engineered environment where the route and speed are controlled through automated or assisted devices.

INTERLOCKING

An arrangement of interconnected signals and signal appliances for which interlocking rules and special instructions are in effect.

INTERLOCKING LIMITS

The tracks between the extreme or outer opposing interlocking signals of an interlocking.

INTERLOCKING SIGNAL

A fixed signal at the entrance to or within interlocking limits to govern the use of the routes.

KICKING

Pushing equipment then releasing it under its own momentum. Does not include humping.

MAIN TRACK

A track of a subdivision extending through and between stations governed by one or more methods of control upon which movements, track units and track work must be authorized.

MARKER

When used, will indicate the last piece of equipment in a movement. It will be one of the following :

- a red light, a red reflectorized plaque, a sense and braking unit (SBU), or
- an occupied caboose, distributed power remote locomotive consist or distributed braking car, when the last piece of equipment in the direction of travel.

METHOD OF CONTROL

Rules and/or special instructions governing the use of a track(s).

MOUNTAIN GRADE

A portion of a track 2 miles in length or greater, with an average grade greater than 1.8%.

MOVEMENT(S)

The term used in these rules to indicate that the rule is applicable to trains, transfers or engines in yard service.

MULTI-TRACK

Two or more main tracks of a subdivision at the same location.

NON-MAIN TRACK (NMT)

Any track(s) other than those listed in time table columns as having CTC, OCS, ABS or Cautionary Limits applicable and unless otherwise provided include a requirement to operate at REDUCED speed.

NON-SIGNALLED SIDING

A siding where non-main track rules apply, the use of which may be governed by special instructions.

OCCUPANCY CONTROL SYSTEM (OCS)

A system in which OCS rules apply.

OCCUPATIONAL TERMS:

Assistant Conductor

An employee working under the supervision of a conductor. May also be referred to as trainman or yardman.

Conductor

An employee in charge of the operation of a movement.

Employee

A person qualified to regulatory and company standards employed by the company. Applies to contract employees and employees of other companies and railways operating and/or performing other rules related duties on the host railway trackage.

Foreman

An employee in charge of the protection of track work and track units.

Locomotive Engineer

An employee in control of the engine.

Pilot

An employee assigned to a movement when the locomotive engineer or conductor, or both, are not fully acquainted with the physical characteristics or rules of the railway over which the movement is to be operated.

Proper Authority

The rail traffic controller or the appropriate railway supervisor.

Rail Traffic Controller (RTC)

An employee in charge of the supervision and direction of movements and for the provision of protection for track work and track units on a specified territory.

Signalman

An employee in charge of an interlocking.

Sub-foreman

A rules qualified employee that works under the protection held by a foreman.

Switchtender

An employee that handles switches for other employees.

Utility Employee

An employee who can be used as a temporary crew member or perform other assigned duties.

RUNNING SWITCH

Pulling equipment then releasing it under its own momentum.

SCHEDULE

Information pertaining to the operating times of a passenger train.

SIDING

A track adjacent and connected to the main track which is so designated in the time table, GBO or operating bulletin.

SIDING CONTROL TERRITORY (SCT)

Non-signalled sidings indicated in special instructions where SCT rules are applicable.

SIGNALLED SIDING

A siding where CTC rules apply.

SIGNAL INDICATION

The information conveyed by a fixed signal.

SINGLE TRACK

One main track on a subdivision at a location.

SWITCHES:

Auto-Normal Switch

A locally-controlled switch, which will automatically restore to normal position after a movement has cleared the switch track circuit.

Dual Control Switch

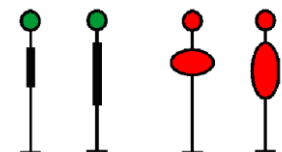
A switch equipped for powered and hand operation.

Electric Switch Lock

An electric lock connected with a hand operated switch to prevent its operation until the lock is released.

Main Track Hand Operated Switch

A switch connected to the main track used to route equipment or a track unit to or from the main track.

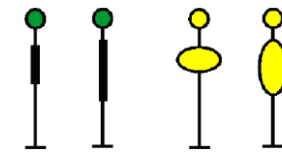


Normal
Position Reverse
Position

Note: Switch targets may be different shapes than illustrated but must not be diamond shape.

Non-Main Track Hand Operated Switch

A switch used to route equipment or a track unit within non-main track territory.



Normal
Position Reverse
Position

Note: Switch targets may be different shapes than illustrated but must not be diamond shape.

Power-Operated Switch

A switch equipped for powered operation, but not equipped for hand operation.

Semi-Automatic Switch

A non-main track switch equipped with an internal securing mechanism that permits equipment to trail through the switch points thus setting the switch for the route being used.



Set for
Normal
Route

Set for Other
Than Normal
Route

Note: Switch targets must be diamond shaped.

Spring Switch

A switch equipped with a spring mechanism arranged to restore the switch points to normal position after having been trailed through.

Switch

A device used to route equipment or a track unit from one track to another.

SPEEDS:

DIVERGING Speed

A speed not exceeding 25 miles per hour.

LIMITED Speed

A speed not exceeding 45 miles per hour.

MEDIUM Speed

A speed not exceeding 30 miles per hour.

REDUCED Speed

A speed that will permit stopping within one-half the range of vision of equipment.

RESTRICTED Speed

A speed that will permit stopping within one-half the range of vision of equipment, also prepared to stop short of a switch not properly lined and in no case exceeding SLOW speed.

When moving at RESTRICTED speed, be on the lookout for broken rails.

When a broken rail is detected, the movement must be stopped immediately and must not resume until permission is received from the RTC or signalman.

SLOW Speed

A speed not exceeding 15 miles per hour.

TURNOUT Speed

Unless otherwise provided by signal indication or special instructions, a speed not exceeding 15 MPH.

STATION

A location identified by a station name sign and designated by that name in the time table.

SUBDIVISION

Railway trackage designated by time table.

SUBDIVISION TRACK

A Non-Main Track so indicated in the time table method of control column that is an extension of the main track, and the through track at that location, defined with subdivision mile posts.

REDUCED speed is applicable to a maximum speed as indicated in the time table. Transfers must not exceed 15 MPH.

TABULAR GENERAL BULLETIN ORDER (TGBO)

A document specific to a movement, containing applicable information from each GBO, instructions and other information requiring compliance within limits indicated in the TGBO.

TIME TABLE

The special instruction that contains subdivision description information and footnotes relating to the operation of movements and track units. Time table may contain information applicable on other tracks.

TRACK OCCUPANCY PERMIT (TOP)

Authority issued for the protection of track units and track work.

TRACK UNIT (TU)

A vehicle or machine capable of on-track operation utilized for track inspection, track work and other railway activities when on a track.

TRACK UNIT SPEED

A speed that;

- (a) permits a track unit to stop within one-half the range of vision of equipment or a track unit;
- (b) permits a track unit to stop short of a switch not properly lined or any obstruction or track defect that may prevent safe passage; and
- (c) does not exceed maximum authorized speed for that track unit.

Track units handling equipment must not exceed the lesser of; authorized freight, passenger or temporary speed restrictions. The delivery method for temporary speed restrictions will be indicated in special instructions.

TRACK WORK

Any work on or near the track that may render the track unsafe for movements at normal speed or where protection against movements may be required for employees and machines involved in track construction and repairs.

TRAILING END

The tail end of the last piece of equipment in a movement in the direction of travel.

TRAIN

An engine with or without cars intended to operate on the main track at speeds in excess of 15 MPH or a track unit when so designated.

TRAIN INFORMATION BRAKING SYSTEM (TIBS)

A system with rear and front communication components capable of:

- (i) monitoring and displaying brake pipe pressure on the rear car;
- (ii) calculating and displaying distance measurement;
- (iii) initiating an emergency brake application at the rear of the train from the controlling locomotive.

TRANSFER

An engine with or without cars operating on main track at speeds not exceeding 15 MPH.

UNATTENDED

When an employee is not in close enough proximity to take effective action.

YARD

A system of non-main tracks, utilized to switch equipment and for other purposes over which movements may operate subject to prescribed signals, rules and special instructions.

GENERAL RULES

- A** Every employee in any service connected with movements, handling of main track switches and protection of track work and track units shall;
- (i) be subject to and conversant with applicable CROR rules, special instructions and general operating instructions;
 - (ii) have a copy of this rule book, the general operating instructions, current time table and any supplements, and other documents specified by the company accessible while on duty;
 - (iii) provide every possible assistance to ensure every rule, special instruction and general operating instruction is complied with and shall report promptly to the proper authority any violations thereof;
 - (iv) communicate by the quickest available means to the proper authority any condition which may affect the safe operation of a movement and be alert to the company's interest and join forces to protect it;
 - (v) obtain assistance promptly when it is required to control a harmful or dangerous condition;
 - (vi) be conversant with and governed by every safety rule and instruction of the company pertaining to their occupation;
 - (vii) pass the required examination at prescribed intervals, not to exceed three years, and carry while on duty, a valid certificate of rules qualification;
 - (viii) seek clarification from the proper authority if in doubt as to the meaning of any rule or instruction;
 - (ix) conduct themselves in a courteous and orderly manner;
 - (x) when reporting for duty, be fit, rested and familiar with their duties and the territory over which they operate;
 - (xi) while on duty, not engage in non-railway activities which may in any way distract their attention from the full performance of their duties. Except as provided for in company policies, sleeping or assuming the position of sleeping is prohibited. The use of personal entertainment devices is prohibited. Printed material not connected with the operation of movements or required in the performance of duty, must not be openly displayed or left in the operating cab of a locomotive or track unit or at any work place location utilized in train, transfer or engine control; and
 - (xii) restrict the use of communication devices to matters pertaining to railway operations. Cellular telephones must not be used when normal railway radio communications are available. When cellular telephones are used in lieu of radio all applicable radio rules must be complied with.
- B** Special Instructions will be found in time tables, general operating instructions, operating bulletins or GBO. They may be appended to or included within copies of the *Canadian Rail Operating Rules* but do not diminish the intent of the rule unless official exemption has been granted.

- C** Employees must:
- (i) be vigilant to avoid the risk of injury to themselves or others;
 - (ii) expect a movement, track unit or equipment to move at any time, on any track, in either direction;
 - (iii) not stand in front of approaching equipment for the purpose of entraining;
 - (iv) not ride the side or above the roof of moving equipment when passing side and/or overhead restrictions;
 - (v) not be on the roof of moving equipment, or on the lading of a moving open top car;
 - (vi) not be on the end of a car while in motion except for the purpose of operating a hand brake; and
 - (vii) not ride on any car known or suspected to contain a shifted load or damaged such that its structure or components may not be secure, or any car trailing such car.
 - (viii) not entrain or detrain moving equipment at a speed exceeding 4 MPH except in the case of an emergency. The intent to entrain or detrain moving equipment must be communicated to the locomotive engineer, who must confirm when the speed is less than 4 MPH.
- D** Each employee must be acquainted with, and be on the lookout for, restricted side and overhead clearances. Where standard restricted clearance signs are used, no other advice of restricted clearance will elsewhere or otherwise be given. If such signs are not provided in a yard or terminal, the location of the restricted clearance will be shown in special instructions.
- E** Overhead and side clearance may be restricted on a track at a main shop, diesel shop or car shop. Where restricted clearance exists on such track, it will not be marked by a standard restricted clearance sign nor will its location be elsewhere or otherwise given.
- F** Employees must not ride on top or side of equipment when on any main shop, diesel shop or car shop track, whether or not the overhead and side clearance is restricted.
- G**
- (i) The use of intoxicants or narcotics by employees subject to duty, or their possession or use while on duty, is prohibited.
 - (ii) The use of mood altering agents by employees subject to duty, or their possession or use while on duty, is prohibited except as prescribed by a doctor.
 - (iii) The use of drugs, medication or mood altering agents, including those prescribed by a doctor, which, in any way, will adversely affect their ability to work safely, by employees subject to duty, or on duty, is prohibited.
 - (iv) Employees must know and understand the possible effects of drugs, medication or mood altering agents, including those prescribed by a doctor, which, in any way, will adversely affect their ability to work safely.
- H** Unless otherwise specified, these rules are applicable without respect to the number of main tracks.
- I** Rules pertaining to the main track also apply to tracks specified as signalled sidings and other signalled tracks.
- J** When an Electronic Communications Method (ECM) is used, each transmission received must be examined to ensure legibility. If the transmission is not legible this must immediately be reported to, and retransmitted by, the RTC. Illegible transmissions must not be used and in the case of paper based authorities, must be destroyed.

- K** When the term “in writing” is used in these rules, special instructions and general operating instructions, if the written permission, authority or instruction referred to is not received personally by the receiving employee, it must be copied by the receiving employee and repeated back to the sender to ensure it was correctly received.
- L** Wherever the following occupational names or titles appear in these rules, special instructions, or general operating instructions, they apply to the employee, who is qualified and is responsible for performing the duties of:
 conductor,
 assistant conductor,
 flagman,
 foreman,
 locomotive engineer,
 pilot,
 rail traffic controller,
 signalman,
 snow plow foreman,
 sub-foreman,
 switchtender.
- M** Wherever the following: engine, train, transfer or movement appear in these rules, special instructions or general operating instructions, the necessary action will be carried out by a crew member or crew members of the movement. In addition:
- (i) where only one crew member is employed, operating rules and instructions requiring joint compliance may be carried out by either the locomotive engineer or conductor, and
 - (ii) in the absence of a locomotive engineer on a crew consisting of at least two members, the conductor will designate another qualified employee to perform the rules required duties of the locomotive engineer.
 - (iii) the minimum operating crew requirement for a freight train or transfer carrying one or more loaded tank cars of dangerous goods is two (2) crew members.
 - (iv) the minimum operating crew requirement for a transfer using remote control locomotives (excluding distributed power) is two crew members.
- N** The following abbreviations and acronyms as well as those authorized by special instructions may be used:
- | | |
|--------------|------------------------------------|
| ABS | Automatic Block Signal System |
| ack | Acknowledgement |
| ANS | Auto Normal Switch |
| AWD | Automatic Warning Devices |
| B/E CTC Sign | Begin/End CTC Sign |
| B/E MT Sign | Begin/End Main Track Sign |
| CL Sign | Cautionary Limit Sign |
| cnr | Conductor |
| com | Complete |
| CTC | Centralized Traffic Control System |

DOB	Daily Operating Bulletin
E	East
ECM	Electronic Communications Method
eng	Engine
engr	Locomotive engineer
exp	Express
FIT	Field Information Terminal
frmn	Foreman
frt	Freight
GBO	General Bulletin Order(s)
HBD	Hot Box and Dragging Equipment Detector
jct	Junction
LCS	Local Control Switch
MPH	Miles per hour
MP	Mile Post
N	North
NA	Not Applicable
NMT	Non-main Track
no	Number
OCS	Occupancy Control System
psgr	Passenger
rpt	Repeat
RTC	Rail Traffic Controller
SCS	Special Control System
SCT	Siding Control Territory
SNS	Station Name Sign
S	South
sdg	Siding
SI	Special Instruction
STK	Subdivision Track
sub	Subdivision
swt	Switch
TGBO	Tabular General Bulletin Order
TIBS	Train Information Braking System

TOP	Track Occupancy Permit
trk	Track
trnm	Trainman
TU	Track Unit
W	West
wk	Work
xover	Crossover
xing	Crossing

RTC may use approved office abbreviations for station and subdivision names and for controlled points when entering addresses on computer generated forms. The normal abbreviations for days of the week and calendar months may be used.

- In these rules when the distance prescribed for the placement of signals, signs or flags is not possible due to track configuration, the maximum distance available applies. If the maximum distance available will place an advance flag at the same location as the flag it governs the approach to, such advance flag need not be placed but such must be indicated in the GBO.

TIME AND TIME TABLES

1. TIME

The 24 hour system will be used and will be expressed in four digits. The digits 2359 or 0001 will be used to express the time at midnight.

2. WATCHES

Every conductor, assistant conductor, locomotive engineer, pilot, foreman, snow plow foreman and such other employees as the company may direct, shall, when on duty, use a reliable watch that indicates hours, minutes and seconds and shall;

- (i) be responsible to ensure that it is kept in proper working condition so that it does not reflect a variation of more than 30 seconds in a 24 hour period;
- (ii) set it to reflect the correct time if it reflects a variation of more than 30 seconds;
- (iii) before commencing work, compare the time on their watch with a railway approved time source. Where a railway approved time source is not accessible, obtain the correct time from the RTC or by comparing with another employee who has obtained the correct time. Every crew member assigned to train, transfer or yard service shall compare the time with one another as soon as possible after commencing work.

3. TIME IN EFFECT

Special instructions will indicate whether Standard Time, Daylight Saving Time or other designated time is in effect.

4. NOTICE OF TIME CHANGE

Notice of time change will be given by operating bulletin and posted at least 72 hours prior to the time change taking effect. Notice will also be given by GBO at least 24 hours prior to the change and for not less than 6 days after it takes effect.

5. EMPLOYEES ON DUTY WHEN TIME CHANGES

Each employee on duty when time changes, who is required to use a watch, must change time as follows:

- (i) From Standard Time to Daylight Saving Time: At 0200 Standard Time, set the time ahead one hour to indicate 0300 Daylight Saving Time;
- (ii) From Daylight Saving Time to Standard Time: At 0200 Daylight Saving Time, set the time back one hour to indicate 0100 Standard Time;
and immediately verify correct time according to Rule 2 clause (iii).

6. TIME TABLES

Each time table, from the moment it takes effect, supersedes the preceding time table.

7. NOTICE OF NEW TIME TABLE OR SUPPLEMENT

Notice will be given by operating bulletin and posted at least 72 hours prior to a new time table or supplement taking effect. Notice will also be given by GBO at least 24 hours prior to the new time table or supplement taking effect and for not less than 6 days after it takes effect.

Notice must also be communicated to all other affected employees.

8. SYMBOLS AND DIAGRAMS

(a) The following symbols when used in the time table indicate:

- B Operating bulletins
- C Cautionary limits
- D Trains or Transfers report departure to RTC
- S Special Derail
- X Crossover between main tracks
- Y Wye
- * See footnote
- + Interlocking - see footnotes.

(b) Method of control and the limits of single track or multi-track will be indicated in the time table.

(c) The location of each interlocking, non-interlocked drawbridge and non-interlocked railway crossing at grade will be indicated in subdivision footnotes or special instructions.

(d) Siding capacity and the extent of Cautionary Limits, TGBO and DOB limits will be indicated in time table columns, to the side of the station column or in subdivision footnotes.

SIGNALS – GENERAL

11. FUSEES

- (a) A movement approaching a red fusee burning on or near its track, or beyond the nearest rail of an adjacent track, must proceed at REDUCED speed to a point two miles beyond the location of the fusee. If moving at other than REDUCED speed, the movement must immediately reduce to that speed.
- (b) A fusee should not be placed on a public crossing at grade or where it may cause fire.
- (c) **OPTIONAL**
When the fusee is located on the track occupied by an approaching movement operating at REDUCED or RESTRICTED speed as required by other than Rule 11, a stop must be made before passing the location of the fusee.

12. HAND SIGNALS

- (a) Employees whose duties may require them to give hand signals must have the proper appliances, keep them in good order and ready for immediate use. Night signals must be used from sunset to sunrise and when day signals cannot be plainly seen.
Note: The hand or a flag displayed in the same manner as the lantern, which is illustrated in the following diagrams, gives the same indication.

METHOD OF DISPLAY AND INDICATION

- (i) Swung from side to side at right angle to the track.



STOP

- (ii) Swung in a circle at right angle to the track at a speed in proportion to the speed required.



MOVE BACKWARD

- (iii) Raised and lowered at a speed in proportion to the speed required.



MOVE FORWARD

(iv) Raised and swung horizontally above the head, at right angle to the track when standing.



APPLY AIR BRAKES

(v) Raised and held at arm's length above the head when standing.



RELEASE AIR BRAKES

(vi) Held horizontally at arm's length.



REDUCE SPEED

(vii) Any object waved violently by anyone on or near the track is a signal to stop.

- (b) A signal given to move forward or move backward must be given in relation to the front of the controlling locomotive.
- (c) A signal must be given in sufficient time before the required action to permit compliance. It must be given from a point where it can be plainly seen, and in such a manner that it cannot be misunderstood. If there is doubt as to the meaning of a signal, or for whom it is intended, it must be regarded as a stop signal.
- (d) Whenever practicable, when switching is being performed, required signals shall be given directly to the locomotive engineer.
- (e) When moving under the control of hand signals, the disappearance from view of either the crew member or lights by which signals controlling the movement are being given, must be regarded as a stop signal.
- (f) A crew member, whose movement is clear of the main track, must not give an approaching movement a hand signal to move forward.
- (g) Where radio is used in lieu of hand signals, employees will be governed by Rule 123.1.

13. ENGINE BELL

(a) The engine bell must be rung when:

- (i) an engine is about to move, except when switching requires frequent stopping and starting after the initial move;
- (ii) passing any movement standing on an adjacent track;
- (iii) approaching, passing or moving about station facilities or shop track areas; and
- (iv) one-quarter of a mile from every public crossing at grade (except within limits as may be prescribed in special instructions) until the crossing is fully occupied by the engine or cars. At crossings where engine whistle signal 14(l) is applicable the engine bell need not be rung.

(b) Should the engine bell fail on the lead locomotive in the consist, repairs must be made as quickly as possible. If repairs cannot be made the movement may proceed to the first point where repairs can be made. The engine bell if available on another locomotive in the consist will be rung continuously or operated by another member of the crew, when available, under the direction of the locomotive engineer.

14. ENGINE WHISTLE SIGNALS

NOTE:

- (i) Wherever the words "engine whistle" appear in these rules they also refer to "engine horn". Signals prescribed by this rule are illustrated by "o" for short sounds; "___" for longer sounds.
- (ii) Engine whistle signals must be sounded as prescribed by this rule, and should be distinct, with intensity and duration proportionate to the distance the signal is to be conveyed. Unnecessary use of the whistle is prohibited.
- (iii) Radio must not be used in lieu of engine whistle signals for indications prefixed by the symbol (#).

(a) o
When standing - braking system is equalized; angle cock may be closed.

(b) o o
Note: Not applicable when switching.

(i) Answer to a "stop" signal (except a fixed signal).

(ii) Answer to any signal not otherwise provided for.

(e) o o o o o o
To notify track forces of fire on or near the right of way (to be repeated as often as required).

(f) Succession of short sounds

(#) Alarm for persons or animals on or near the track.

(l) ___ ___ o ___

(i) (#) At public crossings at grade:

A whistle post will be located 1/4 mile before each public crossing where required. Whistle signal must be sounded by movements:

- exceeding 44 MPH, at the whistle post
- operating at 44 MPH or less, in order to provide 20 seconds warning prior to entering the crossing.

Whistle signal must be prolonged or repeated until the crossing is fully occupied.

EXCEPTION: Not applicable when manual protection is to be provided or when shoving equipment other than a snow plow over a crossing protected by automatic warning devices.

(ii) (#) At other whistle posts indicated in special instructions.

(iii) (#) At frequent intervals when view is restricted by weather, curvature or other conditions.

(iv) Special instructions will govern when such signal is prohibited in whole or in part.

(r) In case of engine whistle failure the engine bell must be rung continuously;

- (i) approaching and moving through curves; and
 - (ii) approaching and passing station facilities, yards and public crossings at grade. In addition, the movement must not exceed 25 MPH entering each public crossing at grade which is not protected by automatic warning devices, until such crossing is fully occupied.
- (t) When a snow plow is operated ahead of an engine, the employee in charge of the snow plow must sound engine whistle signals 14(f) and 14(l). All other engine whistle signals must be sounded by the locomotive engineer as prescribed by the rule.

17. HEADLIGHT

Movements headed by equipment equipped with a headlight must display the headlight:

- (a) at full power in the direction of travel approaching all public crossings at grade until such crossings are fully occupied;
- (b) at full power in the direction of travel while moving on the main track;
- (c) on both ends of the engine while moving on non-main track but may be extinguished on the end coupled to cars.

Exceptions: When not approaching a public crossing at grade the headlight may be extinguished or dimmed:

- (i) approaching or being approached by an opposing movement;
- (ii) on a passenger carrying train, approaching a location where passengers will entrain or detrain;
- (iii) facing oncoming vehicles at night which may be affected on adjacent roadways; or
- (iv) when weather conditions cause the vision of the operating crew to be impaired.

18. HEADLIGHT FAILURE

- (a) If the headlight on a movement fails and repairs cannot be made, ditch lights will be used in lieu of the headlight and the movement may proceed.
- (b) If all headlights and ditch lights have failed, such lights as are available must be used proceeding to the first point where repairs can be made. At public and private crossings at grade not protected by automatic warning devices, movements must not exceed 10 MPH entering the crossing unless it is known to be clear of traffic and will remain clear until occupied.

19. DITCH LIGHTS

A train must have ditch lights displayed continuously in the direction of travel when the headlight is required to be displayed full power.

If ditch light(s) fail en route, the movement may proceed to the next point where repairs can be made.

26. BLUE SIGNAL PROTECTION

- (a) A blue flag by day, and in addition a blue light by night or when day signals cannot be plainly seen, displayed at one or both ends of equipment indicates that workmen are in the vicinity of such equipment. On a track which permits entry of a movement from one end only, a blue signal displayed between the equipment and the switch permitting entry indicates that workmen are in the vicinity of such equipment. When such signals are displayed the equipment must not be coupled to or moved. The removal of the signal from one or both ends of equipment indicates that no workmen are in the vicinity of the equipment and such equipment may be coupled to or moved.

EXCEPTION: When repairs must be undertaken on a manned movement, the locomotive engineer must be notified before repair work is commenced. When so notified, the movement must not be moved nor the brakes applied or released until the workmen have advised that they are in the clear.

- (b) Other equipment must not be placed on the same track which will block a clear view of the blue signal(s) without first notifying the workmen. When equipment is placed on the same track, the movement placing such equipment must remain on that track until the workmen have relocated the blue signal(s) to include the additional equipment.
- (c) Each class of workmen will display the blue signal(s) and the same class of workmen only are authorized to remove them.
- (d) Special instructions will govern the use of other approved methods of protecting workmen performing equipment repairs or inspections.
- (e) When protection is required on a track where the kicking of equipment is permitted per Rule 113.5(a):
 - (i) lock switch(es) with a special lock, in a position to prevent a movement from entering the working limits; or
 - (ii) a blue signal displayed per (a) and a derail locked in the derailing position with a special lock.

27. SIGNAL IMPERFECTLY DISPLAYED

- (a) Except as provided in paragraph (b), a fixed signal which is imperfectly displayed, or the absence of a fixed signal where one is usually displayed, must be regarded as the most restrictive indication that such signal is capable of displaying. An imperfectly displayed signal must be communicated to the proper authority as soon as possible.
- (b) Where a block or interlocking signal is observed with one or more lights extinguished, and at least one light remains displaying either green or yellow, movements may proceed reducing to SLOW speed through turnouts, when practicable, preparing to stop at the next signal.
EXCEPTION: Where a signal displays a solid yellow on the bottom position and one or all of the remaining positions are extinguished, a movement approaching such signal operating:
 - at restricted speed;
 - prepared to stop; or
 - prepared to comply with restricted or reduced speed;
 must consider the signal as displaying RESTRICTING.
- (c) When a signal is known or suspected of being damaged, it must be regarded as displaying the most restrictive indication that can be given by that signal.
- (d) When a block or interlocking signal displays an indication that is in other than the normal progression in relationship to the indication of the advance signal to that signal, the movement must stop immediately consistent with safe train handling practices and contact the RTC or signalman for further instructions.
- (e) Repairs to damaged signals must not be made by other than qualified employees. Signals that have been knocked over must not be re-erected by other than an authorized employee. If it is known or suspected that a signal bungalow has been damaged, such fact must be reported to the RTC immediately.

33. SPEED COMPLIANCE

If speed requirements for their movement are exceeded, crew members must remind one another of such requirements. If no action is then taken, or if the locomotive engineer is observed to be non-responsive or incapacitated, other crew members must take immediate action to ensure the safety of the movement, including stopping it in emergency if required.

34. FIXED SIGNAL RECOGNITION AND COMPLIANCE

- (a) The crew on the controlling engine of any movement and snow plow foremen must know the indication of each fixed signal (including switches where practicable) before passing it.
- (b) Crew members within physical hearing range must communicate to each other, in a clear and audible manner, the indication by name, of each fixed signal they are required to identify. Each

signal affecting their movement must be called out as soon as it is positively identified, but crew members must watch for and promptly communicate and act on any change of indication which may occur.

The following signals/operating signs must be communicated:

- (i) Block and interlocking signals;
 - (ii) Rule 42 and 43 signals;
 - (iii) One mile sign to interlocking;
 - (iv) One mile sign to hot box detector;
 - (v) Stop sign;
 - (vi) OCS begins sign;
 - (vii) Red signal between the rails;
 - (viii) Stop signal displayed by a flagman;
 - (ix) A switch not properly lined for the movement affected;
 - (x) One mile to Cautionary Limit Sign;
 - (xi) Cautionary Limit Sign;
 - (xii) Advance Permanent Slow Order (PSO) Signs; and
 - (xiii) Zone speed Signs where there is a reduction in speed from the previous zone.
- (c) If prompt action is not taken to comply with the requirements of each signal indication affecting their movement, crew members must remind one another of such requirements. If no action is then taken, or if the locomotive engineer is observed to be incapacitated, other crew members must take immediate action to ensure the safety of the movement, including stopping it in emergency if required.

35. EMERGENCY PROTECTION

This rule does not authorize main track occupancy or track work.

- (a) Any employee discovering a hazardous condition, which may affect the safe passage of a movement, must by the use of flags, lights, fusees, radio, telephone, or other means, make every possible effort to stop and/or provide necessary instructions to any movement that may be affected. Flag protection must be provided on main track unless or until otherwise relieved of the requirement.
- (b) A flagman must go the required distance from the condition, and in each direction when possible, to ensure that an approaching movement will have sufficient time and distance to be able to stop before the condition. Unless otherwise provided, a flagman must go at least two miles from the condition to a location where there will be an unobstructed view of the flagman from an approaching movement.
- When a movement is observed approaching, the flagman must display a stop signal using a red flag by day or a lighted red fusee by night or when day signals cannot be plainly seen. The flagman must continue to display a stop signal until the movement being flagged has:
- (i) acknowledged the stop signal with engine whistle signal 14 (b) (two short);
 - (ii) come to a stop; or
 - (iii) reached the location of the flagman.
- (c) A movement stopped by a flagman must not proceed until so instructed by the flagman.
- (d) A flagman must be equipped with a red flag and eight red fusees. The presence of an unbroken seal verifies that a flagging kit is properly supplied.

36. DECREASED FLAGGING DISTANCE

On a subdivision specified in special instructions where maximum speed for movements is not greater than 30 MPH, in the application of Rules 35, 42/842 or 43/843 the distance of at least two miles is decreased to at least one mile.

PROTECTION OF TRACK WORK AND TRACK CONDITIONS

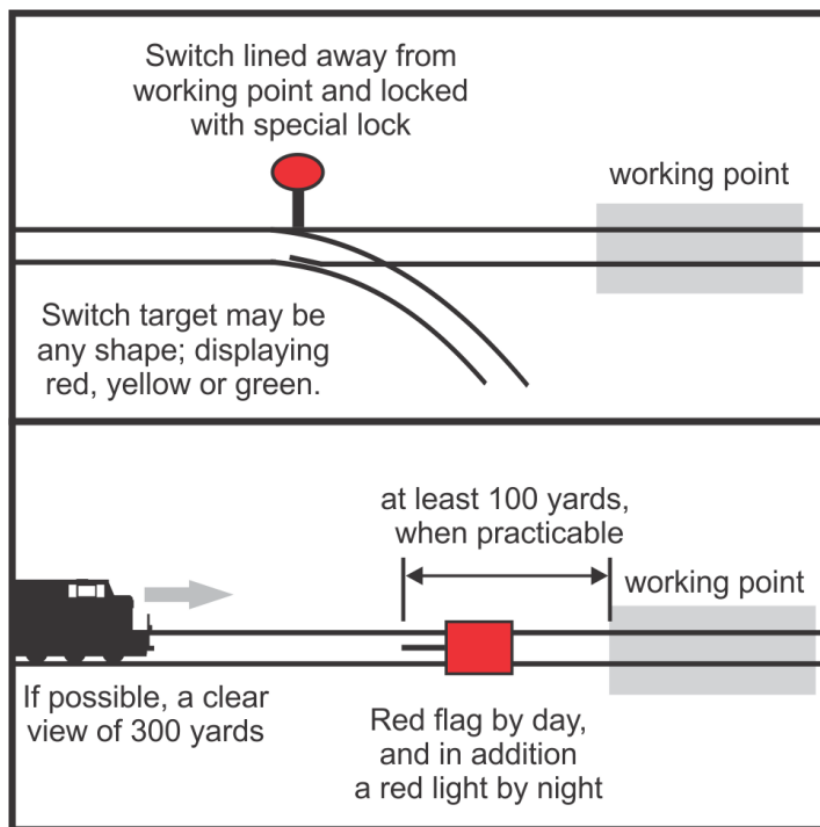
40. GENERAL

- (a) Special instructions will specify when Rules 42/842, 43/843 and 849 are applicable on non-main track.
- (b) When designated by time table footnotes or special instructions that TGBO and/or DOB are applicable on a track that is non-main track, protection of track work and track conditions may be provided as prescribed by Rules 42/842 and 43/843.

41. PROTECTION OF TRACK WORK ON NON-MAIN TRACK AND IN CAUTIONARY LIMITS

This rule is not applicable on main tracks outside of cautionary limits, signalled sidings and other signalled tracks, or on other tracks specified in special instructions.

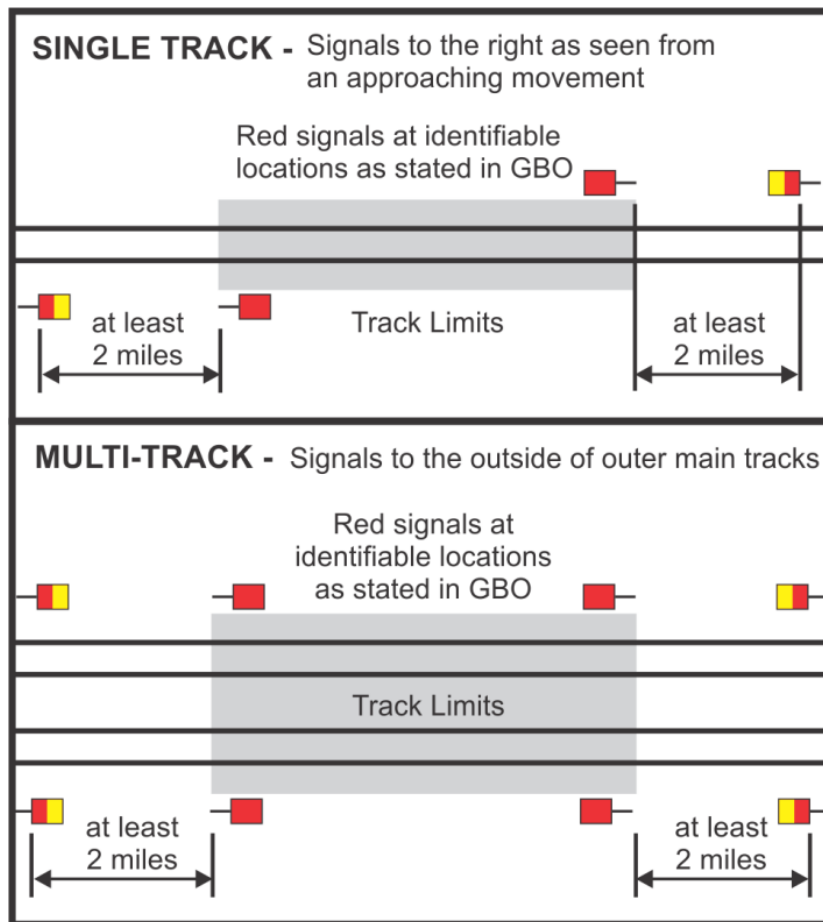
- (i) A movement required to operate on a track protected by a red signal between the rails or a switch locked with a special lock must be stopped before passing it and be governed by any instructions from the foreman.
- (ii) Only the foreman or an employee authorized by the foreman may remove the red signal and/or special lock.
- (iii) Equipment must not be left on the same track that will block a clear view of any red signal.



NOTE: Foreman must refer to Rule 841

42. PLANNED PROTECTION

- (a) Rule 42 signals must not be in place more than 30 minutes prior to or after the times stated in the GBO unless provided for in the GBO.



Note: Foreman must refer to Rule 842

- (b) A movement in possession of the Form Y must not proceed beyond the red signal located at the identifiable location stated in the GBO, enter the track limits stated in the GBO, or make a reverse movement within such track limits until instructions have been received from the foreman named in the GBO.
When a specific track is to be used, instructions from the foreman must specify the track upon which the instructions apply.
- (c) The instructions must be repeated to, and acknowledged by, the foreman named in the GBO before being acted upon.
- (d) When a signalled turnout is within two miles of Rule 42 protection which does not apply on all tracks, every movement must approach such location prepared to comply with the requirements of Rule 42 until it is known which route is to be used.

43. SLOW TRACK PROTECTION

Form V GBO slow track protection will be marked in the field by a:

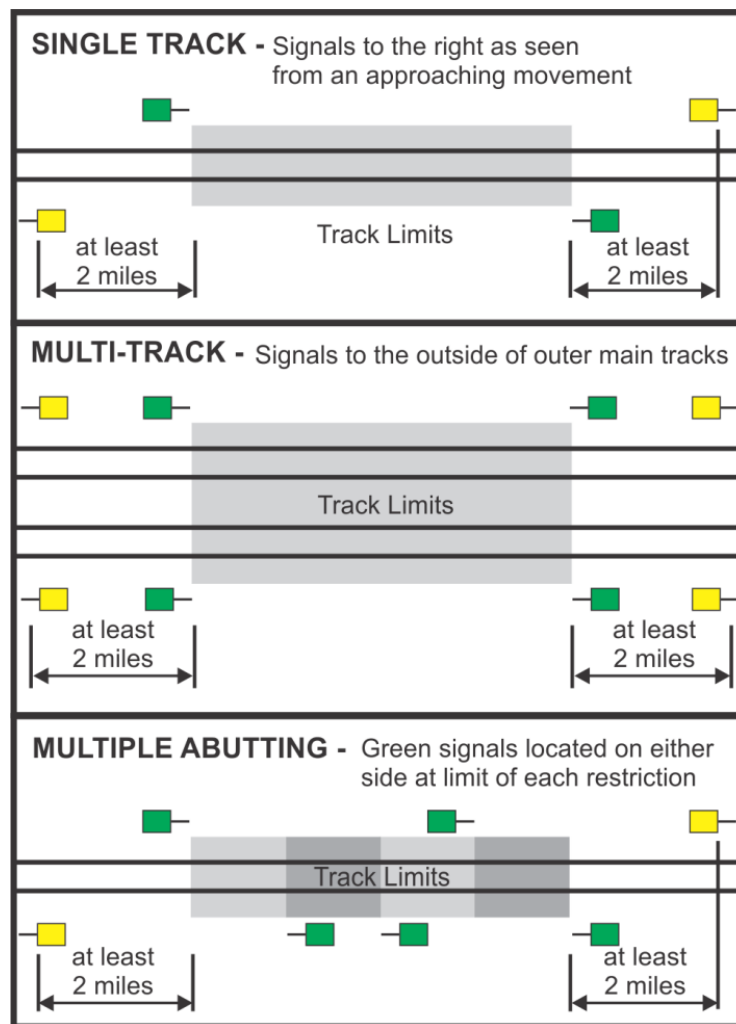
- (i) yellow signal to the right of the track as seen from an approaching movement at least two miles in each direction from the outermost limits indicated in the GBO, and
- (ii) green signal to the right of the track as seen from an approaching movement in each direction, immediately beyond the defect.

Exception: When there are abutting limits contained within a single GBO, a single green signal will be displayed to either side of the track to identify each restriction within the limits.

When a Rule 43 restriction is located at a single mile point, one green signal will be displayed to identify the restriction and may be displayed to either side of the track.

When the placement of signals as prescribed by Rule 43 is delayed, the following will be added to the Form V: "Signals may not be in place."

- (a) A movement must not exceed the speed requirement of the GBO while at/or between opposing green signals.



Note: Foreman must refer to Rule 843.

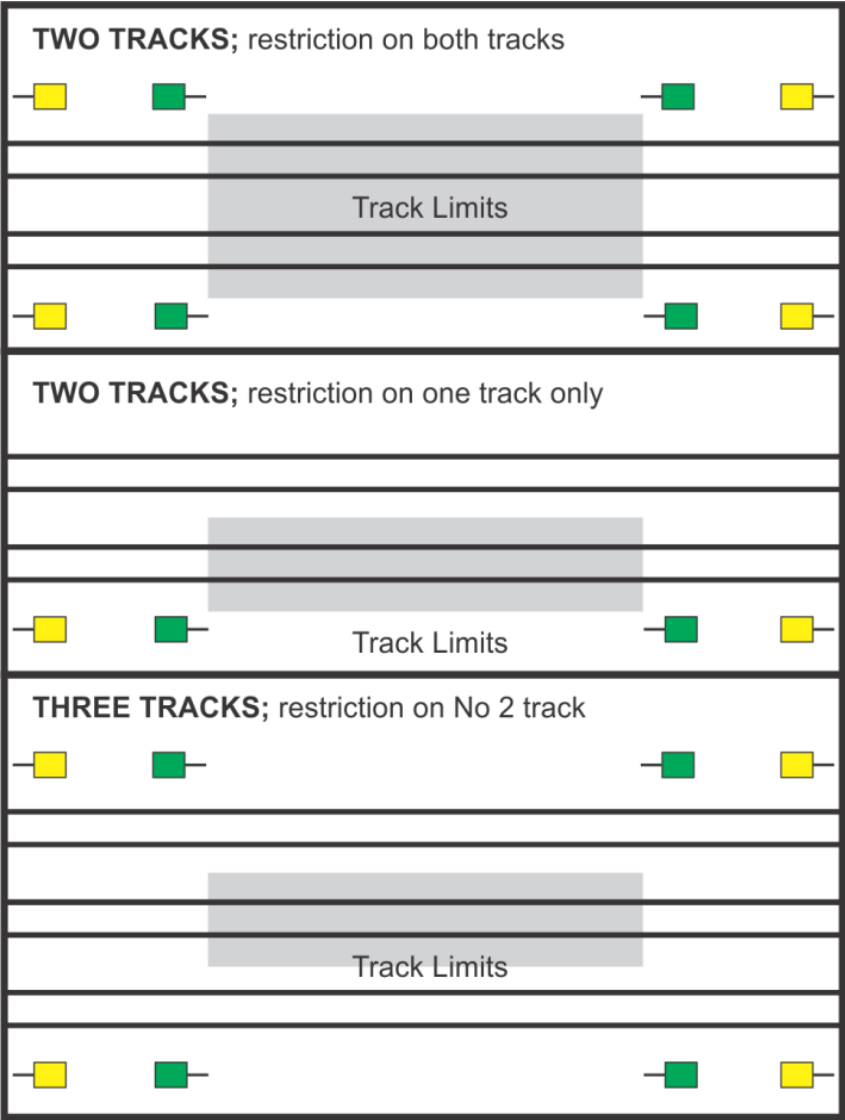
- (b) When a signalled turnout is within two miles of a speed restriction which does not apply on all tracks, every movement must approach such location prepared to comply with the speed restriction until it is known which route is to be used.

44. UNUSUAL TRACK SIGNAL CONDITIONS

- (a) In the absence of any of the signals prescribed by Rule 42, between the times stated in a Form Y, a movement must be governed as though the signals are properly placed. Such condition must be communicated to the RTC as quickly as possible.
- (b)
 - (i) A movement that encounters a yellow over red signal within the 30 minutes provided for in Rule 42(a), may proceed on the instructions received from the foreman named in the GBO. If the foreman cannot be contacted, the movement must be prepared to stop at a red signal and, if no red signal is encountered at the location stated in the GBO, the RTC must be advised.
 - (ii) A movement that encounters a red signal within the 30 minutes provided for in Rule 42(a), must stop, unless authorized to proceed on the instructions received from the foreman named in the GBO. If the foreman cannot be contacted, a crew member must communicate with the RTC as quickly as possible and be governed by instructions received.
 - (iii) A movement that encounters a yellow over red signal or red signal, outside the 30 minutes provided for in Rule 42(a) or without being in possession of a Form Y requiring the placement of such signal, must stop.
A crew member must communicate with the RTC as quickly as possible and be governed by instructions received.
 - (iv) If the TGBO/DOB system and the engineering supervisor for the territory indicate that Rule 42 is not or will not be in effect within the limits of the signal, the RTC may authorize the movement to resume normal speed. The engineering supervisor will arrange for removal of the signals that may include having the crew on a movement pick up the signals.
- (c) A movement within the track limits of a Form Y, at the time such protection takes effect, must be stopped unless a crew member is otherwise instructed by the foreman named in the GBO.
- (d) In the absence of one or more of the signals prescribed by Rule 43, the movement will be governed by the requirement of the Form V. Such condition must be communicated to the RTC as quickly as possible.
- (e) A movement that encounters a yellow or green signal without a GBO requiring the placement of such signal, must reduce speed to 10 MPH and immediately communicate with the RTC. The movement will be governed by instructions received from the RTC. If the TGBO/DOB system and the engineering supervisor for the territory indicate that Rule 43 is not or will not be imminently in effect within the limits of the signal, the RTC may authorize the movement to resume normal speed. The engineering supervisor will arrange for removal of the signals that may include having the crew on a movement pick up the signals.
- (f) When a rail break has been detected by an engineering employee and it is safe to operate over the break at a speed less than posted speed, the RTC will provide GBO protection to affected movements stating the authorized speed over the break and how such location is marked in the field, by either a Rail Break Sign or foreman, at the break. Signals required by Rule 43 will not be in place.

45. SIGNAL PLACEMENT MULTI-TRACK

Except on a subdivision designated in special instructions, signals required by Rules 42/842 and 43/843, must be placed to the outside of the outermost track(s) and not between the main tracks.



OPERATION OF MOVEMENTS

62. UNATTENDED ENGINES

When an engine is left unattended outside of an attended yard or terminal:

- (a) the cab of the engine must be secured to prevent unauthorized entry; and
- (b) subject to (c), the reverser must be removed from the engine;
- (c) during subzero temperatures, an engine that does not have a high idle feature is exempt from (b).

63. FREIGHT TRAIN REQUIREMENTS

Freight trains with cars must operate with TIBS or a manned caboose.

Exception: A freight train that must be separated in order to double, set off or lift cars, cut a crossing or for other similar situations may operate without a TIBS or manned caboose to the extent necessary to perform these tasks, at a speed not exceeding 25 MPH while handling cars.

64. TRANSFER REQUIREMENTS

- (i) Transfers must have air applied throughout the entire equipment consist. The last three cars, if applicable, must be verified to have operative brakes.
- (ii) The locomotive engineer must verify that there are sufficient operative brakes to control the transfer, confirmed by a running test as soon as possible.
- (iii) Remote control locomotives in transfer service must be operated with two operative operator controlled units (OCU).

65. ENGINE IN YARD SERVICE REQUIREMENTS

An engine in yard service that is required to enter main track to double over, take head room or cross over a main track will not be considered a train or transfer except in application of Rules 301-315 and 560-578.

66. SECURING EQUIPMENT AFTER AN EMERGENCY BRAKE APPLICATION ON GRADE

(a) When a train experiences an emergency brake application on a heavy or mountain grade, the operating crew must immediately provide details of the situation to the proper authority, and be governed by any additional instructions received from the proper authority.

(b) When a train experiences an emergency brake application and any portion of the train is located on a mountain grade, the entire train must be considered to be on mountain grade.

(c) In the event of a derailment or a train separation on heavy grade or mountain grade, the portion of the train at greatest risk of unintended movement must be secured first.

(d) When a train experiences an emergency brake application on a mountain grade, the hand brakes must be immediately applied as per (f) before attempting to recover the air brake system.

(e) When a train experiences an emergency brake application on a heavy grade

- i. the train must be secured immediately per (f) if any of the following conditions exist:
 - ambient temperature is -20 degrees Celsius or colder;
 - ambient temperature is between -15 and -19 degrees Celsius, and snow is three inches or greater above the top of rail;
 - the crew has experienced unusual braking conditions or difficulty controlling speed;

- doubt exists as to the ability to safely recover and control the movement;
 - more than one emergency brake application has occurred on the grade; or
 - operating conditions do not permit a recovery attempt
- ii. If none of the conditions in (e) (i) apply, attempt to recover from the emergency brake application. If air does not recover, the train must be immediately inspected for cause. If cause cannot be determined or immediately corrected, so that air can recover, the train must be secured per (f).

(f) When securing the train using the hand brake requirement table, the following apply

- i. If less equipment is present in the movement than required by the following table, hand brakes must be applied on all equipment.
- ii. The retarding force of locomotive(s) is not included in the following hand brake requirements, and must not be used to diminish these requirements.

Total Tons:	Minimum Required Number of Handbrakes							
	Heavy Grade (%)				Mountain Grade (%)			
	1.01-1.2	1.21-1.4	1.41-1.6	1.61-1.8	1.81-2.0	2.01-2.2	2.21-2.4	> 2.4
0 - 2000	4	5	6	7	8	9	11	11
2001 - 4000	8	11	13	15	16	18	20	23
4001 - 6000	14	16	19	23	25	28	31	34
6001 - 8000	19	23	26	30	34	37	41	45
8001 - 10000	25	28	33	38	41	47	52	57
10001 - 12000	28	35	40	46	50	57	62	68
12001 - 14000	34	40	47	53	59	66	73	79
14001 - 16000	39	47	53	61	68	75	83	91
16001 - 18000	45	52	60	69	77	85	94	102
18001 - 20000	50	59	68	77	85	95	105	113
20001 - 22000	53	64	74	84	93	104	115	125
22001 - 24000	59	71	82	92	102	114	126	136
24001 - 26000	64	77	89	100	111	124	136	147
26001 - 28000	70	83	95	107	119	134	147	159
28001 - 30000	75	89	102	116	128	143	157	170

70. REMOTE CONTROL OPERATION

- (a) Where a remote control operation is comprised of two or more employees, two operative OCU must be used.

- (b) Should one OCU become inoperative:
 - (i) Repairs must be made as soon as possible.
 - (ii) The tour of duty may continue with one operative OCU.
 - (iii) The movement may operate on main track in order to proceed to the first point where repairs can be made, provided an employee other than the one with the operative OCU is positioned to operate the emergency brake valve.
- (c) Any crew member other than the employee with the controlling OCU must not foul the equipment without first obtaining verbal confirmation of positive protection.
- (d) OCU must not be operated while moving on other than the movement the employee is controlling.
- (e) When an engine begins to move, a crew member must visually verify the direction the movement is travelling in.
- (f) Movements must not exceed 15 MPH.
- (g) When coupling to equipment, the employee protecting the leading end of the movement must have the controlling OCU.
- (h) Prior to stopping or coupling to equipment, the OCU must be set to its lowest speed.

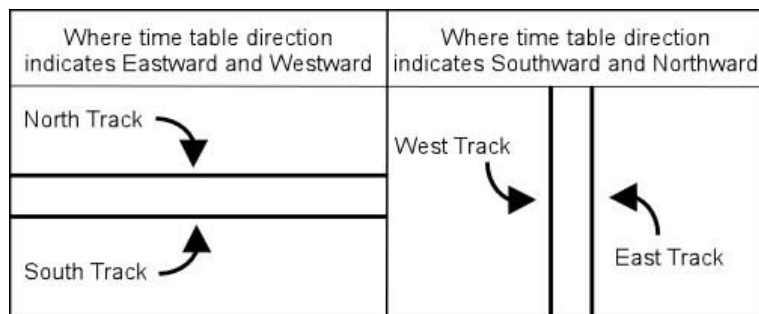
80. MAIN TRACK AUTHORIZATION

- (a) A movement must not foul or enter a main track without authority. Authority is conveyed in:

CTC	By signal indication, RTC permission or written authority.
OCS	Clearance
Cautionary Limits	Rule 94
SCS	Special Instructions
- (b) If a movement occupies or fouls a main track or siding controlled territory without authority, or passes a block or interlocking signal indicating stop without authority to pass such signal; it must be stopped and protection as required by Rules 35 and 125 initiated. The RTC or signalman must be advised as soon as practicable.
 - (i) The RTC or signalman will issue instructions as necessary.
 - (ii) If the instructions include the authority to proceed or reverse direction, unless relieved of the requirement by the RTC or signalman:
 - any dual control or power-operated switches occupied by the movement must be examined to ensure that the switch points are properly lined for the route to be used and no part of the switch is damaged or broken.
 - Rule 104.2(b) must be complied with at dual control switch(es). In application of Rule 104.2(b), the movement may be moved before the dual control switch is operated by hand, but only sufficient distance to clear the wheels from the actual switch points.

81. DESIGNATION OF MULTI-TRACK

- (a) Where two main tracks are in service, unless otherwise directed in special instructions, they must be designated as;



- (b) Where more than two main tracks are in service they must be numbered. Unless otherwise specified in the time table, where time table directions are eastward and westward, tracks will be numbered from the north as, “No 1 track”, “No 2 track” and so on; where time table directions are northward and southward, tracks will be numbered from the east as, “No 1 track”, “No 2 track”, and so on.

82. LIMITS OF AUTHORITY

Specific limits contained in written authorities must be defined by identifiable locations. These may include station names, station name signs, switches, signals, mile posts and other signs or infrastructure that are identified with a specific mileage.

- (a) When a switch or signal is used to define the limits, the authority extends only to the fouling point of the switch or to the signal location.
- (b) When mile posts or specific mileages are used to define the limits, the authority extends only to the specific mileage indicated.
- (c) When station names are used to define the limits, the authority does not include the use of the main track between the siding switches at either station named. Where there is no siding, authority extends to the station name sign.

83. OPERATING BULLETINS

- (a) Operating bulletins will be issued by the proper authority and in the prescribed format. Employees responsible for posting or displaying operating bulletins must record on each bulletin the time and date it is posted or displayed. Operating bulletins will only contain information or instructions pertaining to the operation of movements. Duplicate bulletin numbers must not be in effect at the same time.
- (b) Before commencing work at their home location where operating bulletins are posted or displayed, every employee responsible for the operation or supervision of movements must read and understand the operating bulletins that are applicable to the territory that they will operate on.
- (c) A Summary bulletin, containing the number, date and contents of, or reference to, each operating bulletin remaining in effect, will be issued at intervals indicated in special instructions. Operating bulletins of a previous date, which are not included or referred to in the Summary bulletin, become void. Summary bulletins may also contain full content of operating bulletins that take effect on or after the effective date of the Summary bulletin and will not be posted or displayed. All employees responsible for the operation or supervision of movements must have a copy of the current Summary bulletin accessible while on duty.

84. REPORTING DELAYS

The conductor must ensure that the RTC is promptly advised of any known condition which may delay their train or transfer.

85. TRACK RELEASE REPORTS

- (a) The conductor will ensure the RTC is promptly advised of the time their movement has arrived, left or cleared a location or at a time specified by the RTC or after clearing the limits of the last proceed clearance for that subdivision.
- (b) Prior to making such report, the conductor must confirm with other crew members the accuracy of the information to be provided.
- (c) When a track release report is transmitted to the RTC, the RTC must, as it is transmitted, verify the movement identification and record the location into the computer assisted system. If correct the locomotive engineer must confirm correctness of the report to the RTC.

85.1 LOCATION REPORTS (OPTIONAL TO EXISTING)

- (a) An employee must ensure the RTC is promptly advised when their movement has arrived, left or cleared a location or at a time specified by the RTC or after clearing the limits of the last proceed clearance for that subdivision.
- (b) Prior to making such report, the employee providing the report must confirm with other crew members the accuracy of the information to be provided.
- (c) When a location report is transmitted to the RTC, it must be entered in the computer system by the RTC as it is received; repeated from the computer screen by the RTC to the movement. If correct, the employee who provided the report must confirm correctness of the report to the RTC.

94. CAUTIONARY LIMITS

This rule is not applicable in CTC and does not authorize track work.

- (a) A movement or track unit is authorized to use the main track within cautionary limits.
- (b) Movements must comply with the provisions of Rule 105(c), and in addition must also be prepared to stop short of the red signal prescribed by Rule 41 or a switch not properly lined.
- (c) Each cautionary limit sign and advance sign will be reflectorized. An advance sign will be placed at least one mile in advance of each cautionary limit sign. At locations where the placement of an advance sign or signs is not practicable at the required distance, it will be so indicated in special instructions.

101. PROTECTION AGAINST EXTRAORDINARY CONDITIONS

- (a) A movement must be fully protected against any known or suspected condition that may interfere with its safe passage.
- (b) A movement must stop at once and be fully inspected when it is known or suspected to have struck any object that may interfere with its safe operation. The RTC must be notified as quickly as possible.
- (c) When a portion of a movement is left on the main track, precautions must be taken by the crew to protect the remaining portion against the return move.

101.1 DIMENSIONAL TRAFFIC

When the dimensions of traffic require that special arrangements be made to permit moving past other movements, the wide traffic will be protected by the RTC against other main track movements. Advice of such protection will be provided to the crew in writing or verbally.

The RTC will not provide protection against equipment on non-main tracks. The crew handling the wide traffic must protect it from such equipment.

101.2 EQUIPMENT LEFT ON MAIN TRACK

Equipment may be left on the main track when protected by:

- (i) clearance;
- (ii) Form T GBO; or
- (iii) cautionary limits.

Communication to the RTC must include the location of the equipment and the outer limits of the Form T protection must be expressed in whole miles or by other identifiable locations. In CTC and controlled interlockings, once the RTC has been advised, Form T protection need not be provided. The RTC must inform each movement, required to enter the occupied track, of the location of the unattended equipment.

102. EMERGENCY STOP PROTECTION

- (a) The crew of a movement stopping as a result of an emergency brake application, or other abnormal condition, which may cause an adjacent main track to be obstructed, must:
 - (i) immediately transmit a radio broadcast on the standby channel in the following manner: "EMERGENCY, EMERGENCY, EMERGENCY, (movement) on (designated track), stopped (stopping) in emergency between mile _____ and mile _____ (subdivision)";
 - (ii) as soon as possible, advise the RTC of the movement's emergency stop location, indicating whether adjacent tracks and tracks of other railways are liable to be obstructed;
 - (iii) repeat the emergency broadcast outlined in (i) at intervals not exceeding 90 seconds until advised by the RTC that all affected movements on other tracks have been secured, stopped or advised of the emergency stop, or it is known that adjacent tracks or tracks of other railways are safe and clear for movements;
 - (iv) if unable to comply with (i), (ii), (iii), the adjacent track must be protected as per Rule 35(b) EMERGENCY PROTECTION.
 - (v) When tracks of other railways may be obstructed the emergency radio broadcast must be transmitted on their standby channel if practicable.
- (b) Other movements must:
 - (i) stop at once if closely approaching the location stated in the emergency broadcast; or
 - (ii) stop prior to reaching the location stated in the emergency broadcast; and
 - (iii) after stop has been made, proceed prepared to stop short of an obstruction until it is known that the track is safe and clear.
- (c) The RTC must:
 - (i) immediately secure and advise affected movements on other tracks of the location of the movement in an emergency stop;
 - (ii) by use of a dedicated emergency communication system, alert the RTC controlling adjacent tracks of other railways liable to be obstructed, providing the location of the emergency stop; and
 - (iii) advise the crew of the movement involved in the emergency stop when all other affected movements have been advised of the condition.
- (d) Rule 102 is applicable to a movement operating on a track that is adjacent to a siding where siding control territory rules (SCT) are applicable.

103. PUBLIC CROSSINGS AT GRADE

- (a) Where a railway track and a public road share the same roadbed and there is no fence or other barrier between them, moving rail cars not headed by an engine or when headed by a remotely controlled engine must be protected by a crew member on the leading car or on the ground, in a position to warn persons standing on, or crossing, or about to cross the track.
- (b) When required by special instruction or when cars not headed by an engine, snow plow or other equipment equipped with a whistle and headlight, are moving over a public crossing at grade, a crew member must provide manual protection of the crossing until the crossing is fully occupied.

EXCEPTION: Manual protection of the crossing is not required provided the crossing is equipped with automatic warning devices and a crew member is on the leading car to warn persons standing on, or crossing, or about to cross the track. This exception does not modify the application of Rule 103.1 (a).

- (c) Crew members must not give vehicular traffic a hand signal to proceed over a crossing.
- (e) Equipment must not be left standing within 100 feet of the travelled portion of a public or private crossing at grade, except where it is necessary to leave such equipment for loading or unloading.
- (f) Before switching or operating a remote control locomotive over an unprotected public crossing at grade where the view of the crossing by the locomotive engineer is obscured, arrangements must be made for a crew member or other employee to be in position to observe the crossing and give signals and instructions to the locomotive engineer as necessary.
- (g) When providing manual protection of a crossing, a crew member or other qualified employee must be on the ground ahead of the movement, in a position to stop vehicular and pedestrian traffic before entering the crossing. A hand signal by day and a light or a lighted fusee by night will be used to give a signal to stop vehicular and pedestrian traffic over such crossing. The movement must not enter the crossing until a signal to enter the crossing has been received from the employee providing the manual protection.

When the crossing is known to be clear of traffic, and will remain clear until occupied, manual protection need not be provided.

103.1 PUBLIC CROSSINGS AT GRADE WITH WARNING DEVICES

- (a) When a movement passes over any public crossing at grade equipped with automatic warning devices, it will be necessary, before reversing over the crossing, for a crew member to provide manual protection of the crossing.
- (b) Unless otherwise directed by special instructions, a main track movement over a public crossing at grade, equipped with automatic warning devices, which;
 - (i) has stopped or is switching, on the main track in the vicinity of the crossing; or
 - (ii) is entering the main track in the vicinity of the crossing; or
 - (iii) has been authorized to pass a block or interlocking signal indicating Stop which is located within 300 feet of the crossing;must not exceed 10 MPH from a distance of 300 feet from the crossing until the crossing is fully occupied by the movement. In addition, unless manually protected, the crossing must not be occupied until the warning devices are known to have been operating for at least 20 seconds.
Applicable to item (iii): At all other crossings within the block, movements must not exceed 15 MPH entering the crossing unless the warning devices are known to have been operating for at least 20 seconds prior to occupancy.
- (c) Unless otherwise directed by special instructions, a movement on non-main track over a public crossing at grade, equipped with automatic warning devices, must not exceed 10 miles per hour from a distance of 300 feet until the crossing is fully occupied.
- (d) At a public crossing at grade where special instructions require that warning devices be operated by pushbutton, or other appliances, or that movements stop at stop signs, movements affected must not occupy the crossing until the warning devices have been operating for at least 20 seconds. Pushbutton boxes must be closed and locked when not in use.
- (f) When advised by special instructions that rusty rail or other conditions may exist, occupancy of crossings with automatic warning devices must be manually protected unless it is known that warning devices have been operating for at least 20 seconds.
- (g) At crossings equipped with automatic warning devices indicated in special instructions, movements must not accelerate by more than 5 MPH unless automatic warning devices are known to have been operating for at least 20 seconds.

- (h) Employees observing the improper operation of any automatic warning device must notify the RTC or person responsible for the territory by the quickest available means. The person notified must immediately notify those charged with repair and/or responsibility.
- (i) On track which the RTC can prevent movements from accessing the crossing must be protected by the RTC using blocking or other methods of securement until all affected movements are advised in writing to apply Rule 103(g).
EXCEPTION: A movement may be provided instructions verbally when:
- within two controlled blocks of the crossing; or
 - there is no controlled block prior, within 25 miles.
- (ii) On track which the RTC cannot prevent access, the person responsible for the territory must instruct all affected movements to apply Rule 103(g).
- (i) A movement following another movement within 1500 feet may not properly activate crossing warning devices and therefore, must not obstruct any public crossing at grade equipped with automatic warning devices until:
- the warning devices are known to have been operating for at least 20 seconds;
 - gates, if any, are in horizontal position; or
 - a crew member applies Rule 103(g) at the crossing.

SWITCHES

104. HAND OPERATED SWITCHES

General

- (a) **Operation of Switches** - semi-automatic, spring, dual control or auto-normal switches operated by hand are considered hand operated switches, and all rules governing hand operated switches apply.
- (b) Except while being turned, each switch must be secured with an approved device. When a switch has been turned, the points must be examined and the target, reflector or light, if any, observed to ensure that the switch is properly lined for the route to be used.
- (c) A switch must not be turned while any part of a car or engine is between the switch points and the fouling point of the track to be used, except when making a running switch or in the application of the exception to Rule 114.
- (d) Handling of main track hand operated switches by other than a crew member.
When arrangements are made for an employee to take charge of a switch(es), the movement must receive verbal confirmation that the switch has been restored to normal position. Verbal advice of switch position may be provided to a movement by an employee. The approaching movement must not act on such information unless advised that the employee is at the switch and will remain in charge of the switch.
- (e) If it is known or suspected that either of the points or any part of a switch is damaged or broken, the switch must be protected until it can be made safe for use. A report must be made to the RTC or employee responsible for the territory by the quickest available means.
- (f) When a switch point lock is provided, it must be locked when the switch is left in normal position. Employees must familiarize themselves with the location of switch point locks.

Main Track Hand Operated Switches

Notes:

- (i) A main track hand operated switch must display a reflectorized target, or light and target except in CTC or on a subdivision specified in special instructions.
- (ii) At an electrically locked hand operated switch, instructions posted at the switch or in special instructions, will govern the operation of the switch and entry to the main track or interlocking route.
- (h) Unless otherwise specified by special instructions, the normal position for a main track switch is for the main track route. Except as provided in paragraph (i), main track switches must be left lined and locked in normal position.
- (i) **Left in Reverse Position**
A main track switch may be left in the reverse position when;
 - 1. directed by GBO, clearance or special instructions, and protection has been provided against all affected movements,
 - 2. attended by an employee, who must be in position to restore the switch to normal before it is occupied by an approaching movement on the main track,
 - 3. occupied by equipment,
 - 4. required in the application of Rule 41/841,
 - 5. in OCS or Cautionary Limits;
 - (i) equipment is left on the main track,
 - (ii) the equipment is left as close as practical to the switch, and
 - (iii) operation over the same switch is required when returning to such equipment,
 - 6. in CTC, equipment is left within the same controlled block. When this cannot be done, RTC permission must be obtained.

Notes:

- (i) Except when switching, main track switches when left in the reverse position, must be left locked.
- (ii) Unless authorized to leave a main track switch in reverse position or so instructed by the RTC, an employee encountering a main track switch in reverse position must restore the switch to normal position and comply with the requirements of (iii).
- (iii) An employee encountering a main track switch in normal position after having a warning that the switch is in reverse position must;
 - communicate to other crew members or employee that the switch is restored to normal, and
 - report to the RTC from the location of the switch i.e. physically situated at or having the switch in sight, or the switch at the time is occupied by a portion of the movement.If the RTC cannot be contacted, the employee may leave that location, leaving the switch lined and locked in the normal position.
- (iv) The RTC must not act on any report of switch position that was not received from the switch location. Additionally, the RTC must not remove protection for the reverse switch until it can be confirmed that there are no other movements authorized to leave the switch in the reverse position.
- (j) Except when switching, when a movement is closely approaching or passing over a main track switch, other than a dual control switch, employees must keep at least 20 feet from the switch stand, and must, when practicable, on single track, stand on the opposite side of the track.
- (k) On single track, a crew member of a movement stopped on the main track to meet or to be passed by another movement, will, when practicable, reverse the switch for the approaching movement and protect it unless relieved by a crew member of the other movement.
- (l) Unless otherwise directed by special instructions, the normal position for a main track junction switch is when set for through movement on one subdivision.
- (m) When a movement diverges from a main track, the switch used must not be restored to normal position until the fouling point has been cleared.
- (n) The switches at both ends of a crossover are normal when set for a through movement on the other tracks. When a crossover is to be used, the switch in the track on which the movement is standing must be reversed first. Both switches must be reversed before crossing over. Before either switch is restored to normal position the movement must be clear of the crossover.

Hand Operated Non-Main Track Switches

- (o) Unless otherwise specified by special instructions, non-main track switches, when equipped with a lock, must be lined in normal position and locked after having been used.

Main Track Switches in OCS Territory

- (p) Unless or until the switch is seen to be in normal position, movements approaching a main track hand operated switch in a facing point direction in OCS territory, unless otherwise governed by signal indication, must not exceed the following speeds from one-quarter of a mile of the switch;

PASSENGER	50 MPH
FREIGHT	45 MPH
FREIGHT handling	
Special Dangerous	
Commodities	40 MPH
- (q) The employee handling a main track hand operated switch in non-signalled territory must, from the location of the switch, communicate with another employee to confirm the position in which the switch has been left, lined and locked. The employee receiving this report must repeat it back to the employee who handled the switch. Communication may be achieved by personal contact, radio or telephone. A lone employee unable to communicate with any employee other than the RTC, must communicate with the RTC.

This rule also applies where ABS signals do not govern movements in both directions.

104.1 SPRING SWITCHES

- (a) A spring switch will be identified by a spring switch sign bearing the letters "SS".
- (b) Employees must keep clear of the switch handle while it is being lifted or released.
- (c) When trailing through a spring switch, a movement that stops must not be reversed, nor slack taken, until the switch has been properly set by hand.
- (d) When ice or snow conditions warrant, all movements must stop before trailing through a spring switch and examine the switch points, cleaning them if necessary.
- (e) When a movement is required to operate over a spring switch in the facing point direction at RESTRICTED speed, a stop must be made before the leading wheels are on the switch points, and the switch points must be examined from a position on the ground.
 - (i) If the points are found to be properly closed the movement will be governed by the indication of the signal, if any.
 - (ii) If the switch points are not properly closed and cannot be closed by use of the switch handle, the points must be spiked in the proper position and the movement will be governed by the indication of the signal, if any.After operating over a spiked spring switch, the spike must be removed and the RTC or employee in charge notified as quickly as possible.

104.2 DUAL CONTROL SWITCHES

- (a) Except as required by rule, a dual control switch must not be placed in hand position without permission from the RTC or signalman.
- (b) When a movement is required to operate over a dual control switch under a Stop indication, unless relieved of the responsibility by the RTC or signalman, the movement must not proceed until;
 - (i) the selector lever is placed in "hand" position;
 - (ii) the hand throw lever is operated until the switch points move in both directions with the action of the hand throw lever; and
 - (iii) the switch is lined by hand for the route to be used. The selector lever must be restored to "power" position and locked, but not before the movement has occupied the switch points.
- (c) The RTC or signalman must not relieve a crew of the requirements of paragraph (b) until it has been determined, from the office control devices and indications, that dual control switches in the route to be used are properly lined. When so relieved, a crew member must observe that the switch points are lined for the authorized route.
- (c) **OPTIONAL (to above with approved system)**
The RTC or signalman may relieve a crew of the requirements of paragraph (b) when automated office control devices confirm that dual control switches are properly lined for the route generated on the authority that will be issued to the movement.
- (d) When switching is to be performed over a dual control switch, in conjunction with Rule 566.1 or 577.1, the switch may be operated by hand after authority has been obtained as prescribed by Rule 566, 567 or 577. The selector lever must be placed in "hand" position. The hand throw lever must be operated until the switch points move in both directions with the action of the hand throw lever. The selector lever must be left in "hand" position until switching is completed. The RTC must be advised when the selector lever has been restored to the "power" position and locked.

104.3 POWER-OPERATED SWITCHES AT A STOP SIGNAL

When the crew of a movement is authorized to pass a stop signal to move over a power-operated switch, a crew member must observe that the switch points are lined for the authorized route.

104.4 SEMI-AUTOMATIC SWITCHES

- (a) A semi-automatic switch will be equipped with reflectorized targets.
- (b) When ice or snow may affect the ability of the switch points on a semi-automatic switch to close properly when operated by wheel flange, a member of the crew must manually line the switch and ensure the points are properly lined before a trailing move is commenced over the switch. Movements operating in a facing point direction must observe the position of the points in addition to the target indication before proceeding over a semi-automatic switch.
- (c) After coupling to equipment at a semi-automatic switch, or when reversing direction through such switch, a facing point move must not be made, unless one unit of equipment has trailed entirely through the switch, or it is known that the points are properly lined for the movement.

104.5 DERAILS

- (a) The location of each derail will be marked by a sign, unless otherwise directed by special instructions. Employees must be familiar with the location of each derail.
- (b) A movement or track unit must stop short of a derail set in the derailing position.
- (c) Each derail, other than a Special Derail or a Blue Flag Derail, must be left in the derailing position.
- (d) The location of SPECIAL DERAILS will be indicated in the time table or special instructions, will be switch stand operated and identified in the field with a reflective red letter "D" on a reflective yellow target, or a sign indicating "Special Derail" which will be visible when in the derailing position.

The following requirements govern their use:

 - they will only be in the derailing position when unattended equipment is present;
 - equipment to be left must be coupled together except when required to clear a crossing or on account of a mechanical defect; and
 - movements required to move at RESTRICTED speed on a track where a SPECIAL DERAIL is located must, in addition to the requirements of RESTRICTED speed, approach such derail prepared to find it in the derailing position.
- (e) All derails must be left secured with a locking device.
- (f) Derails used in conjunction with blue flags will be in the derailing position only when protection for personnel is required. When protection is no longer required, they will be locked in a non-derailing position.
- (g) Where hand operated switch point derails are in use, the points must be examined and the target observed to ensure that the derail is in the proper position.

105. OPERATION ON NON-MAIN TRACK

Special instructions will indicate when this rule is not applicable on a specific track.

Unless otherwise provided by signal indication, a movement using non-main track must operate at REDUCED speed and be prepared to stop short of the end of track or the red signal prescribed by Rule 41.

- (a) In CTC, movements may only enter a siding by signal indication or with permission from the RTC.
- (b) Unless otherwise provided by signal indication or special instructions, movements operating on non-main tracks must not exceed fifteen (15) MPH.
- (c) In addition to moving at REDUCED speed, a movement using a non-signalled siding or using other non-main tracks so designated in special instructions, must operate at a speed that will allow it to stop within one-half the range of vision of a track unit.

105.1 EQUIPMENT LEFT ON SIDING

- (a) Unless otherwise provided, the RTC must be advised prior to leaving equipment on a siding. The RTC will notify other movements affected as soon as practicable.
- (b) When occupied service equipment is placed on a siding, a GBO will be issued specifying the location of such equipment. If the switches of the siding are locked with special locks, the GBO will so state.

106. CREW RESPONSIBILITIES

All crew members are responsible for the safe operation of movements and equipment in their charge and for the observance of the rules. Under conditions not provided for by the rules, they must take every precaution for protection.

A utility employee becomes a crew member when working with any movement.

107. RESTRICTIONS AT PASSENGER TRAIN STOPS

Unless otherwise directed by special instructions, a movement must operate with extreme care when passing along side a train carrying passengers that is discharging or receiving traffic.

It must not pass between such train and the station or platform, unless the movement is properly protected.

Passengers shall be allowed to entrain and detrain only after positive protection has been provided against movements approaching on any main track they must cross when moving between the station and the train.

108. PRECAUTIONS WHILE SWITCHING (OPTIONAL)

When switching is performed, precautions must be taken by crew members to prevent unintended rollbacks and/or fouling of other tracks and equipment.

109. LOCOMOTIVE ENGINEER PRECAUTIONS

When duties require the locomotive engineer to temporarily exit the controlling locomotive cab on a standing movement, the locomotive engineer must:

- (a) fully apply the independent brake;
- (b) apply the automatic brake, if required;
- (c) remove the reverser, unless the locomotive is not equipped with a high idle feature;
- (d) immediately after stepping away from the control stand, visually verify that:
 - (i) the gauges do not indicate a possible release of the air brakes; and
 - (ii) the independent and automatic brake valve handles remain in the selected positions; and
- (e) verbally confirm with another employee the measures taken above.

110. INSPECTING PASSING TRAINS AND TRANSFERS

- (a) When duties and terrain permit, at least two crew members of a standing train or transfer and other employees at wayside must position themselves on the ground on both sides of the track to inspect the condition of equipment in passing trains and transfers. When performing a train or transfer inspection, the locomotive engineer will inspect the near side. When a group of wayside employees is present, at least two employees must perform the inspection.

EXCEPTION: Crew members of passenger trains are exempted from the above requirements except when standing at meeting points in single track territory. However, every effort must be made to stop a train or transfer when a dangerous condition is noted.

- (b) Employees inspecting the condition of equipment in a passing freight train or transfer must, when possible, broadcast the results of the inspection.
- (c) Every effort must be made to stop a passing train or transfer if a dangerous condition is detected. Each crew member of a train or transfer must be alert at all times for a stop signal or

communication given by an employee. The report to the train or transfer being inspected must state only the location of the dangerous condition and what was observed and not speculate as to the cause.

- (d) When a crew member is located at the rear of a train or transfer, a front crew member must, when practicable, notify the rear crew member of the location of employees in position to inspect their train or transfer.

111. TRAIN AND TRANSFER INSPECTION

- (a) The crew must know that equipment in their train or transfer is in good order before starting and inspect it whenever they have an opportunity to do so. Equipment added to a train or transfer en route must be inspected with extra care to ensure it is in good order.
- (b) When crew members are on the rear of a moving train or transfer they must inspect, at every opportunity, the track to the rear for evidence of dragging or derailed equipment.
- (c) All crew members on a moving train or transfer must make frequent inspections of both sides to ensure that it is in order.
- (d) On completion of crew-planned inspections and at locations where inspection is required by special instructions, crew members will, when possible, voice communicate to each other the results of such inspections.
- (e) **OPTIONAL:** The conductor first arriving at a meeting point will arrange for a walking inspection of their freight train or transfer, inspecting as much as time and conditions permit.

112. SECURING UNATTENDED EQUIPMENT

When equipment is left unattended, it must be secured to prevent it from moving unintentionally.

In the application of this rule:

- (i) For the purpose of paragraphs (b) to (g), equipment is considered unattended when an employee is not in close enough proximity to take effective action to stop the equipment should it move unintentionally.
- (ii) Parking brakes are considered to be hand brakes.
- (iii) Application of hand brakes must not be made while equipment is being pulled or shoved.
- (iv) Before leaving equipment, the employee securing such equipment must confirm with another employee the manner in which it has been secured.
- (v) When one or more locomotives are coupled to one or more cars, hand brakes must be applied on all locomotives in the lead consist of the unattended movement. In the application of (g), the number of hand brakes applied on each locomotive in the lead consist must not be included in determining the number of hand brakes required on the cars.

(vi) Testing Hand Brake Effectiveness

When testing the effectiveness of hand brakes, ensure all air brakes are released and:

- (a) allow the slack to adjust. It must be apparent when slack runs in or out, that the hand brakes are sufficient to prevent the equipment from moving; or
- (b) apply sufficient tractive effort to determine that the hand brakes prevent the equipment from moving when tractive effort is terminated.

If the effectiveness of hand brakes is not sufficient to prevent the equipment from moving, apply one or more additional hand brakes and re-test.

(a) Main Track, Subdivision Track, Siding or High Risk Locations

Equipment shall be considered unattended and must be secured unless:

- The equipment is coupled to a controlling locomotive; **and**
 - The brake pipe of the controlling locomotive is coupled to the equipment and the brake pipe is open; **and**
 - A qualified employee is on the controlling locomotive and able to operate the air brake system. Alternatively, a locomotive engineer can be located on the ground in accordance with CROR 109 and within arm's reach of the locomotive to complete passing train/transfer inspections.
- (i) When equipment not connected to an air source is left unattended, at least the minimum number of hand brakes as indicated in (g) must be applied, tested for effectiveness, and at least one of the following additional securement methods must be used:
- derail(s);
 - track where rail physically ends;
 - bowled terrain as identified in special instructions; or
 - air brakes up to 2 hours.

When air brakes are used as an additional method of securement:

- the air brake system must be sufficiently charged to ensure proper brake application;
- the brake pipe must be fully vented at a service rate or has an emergency brake application; and
- on freight equipment, the angle cock is left fully open.

If required to be left longer, an employee must observe that the equipment has not moved, the air brake pistons remain extended, and the hand brakes are still applied. Such results must be communicated to another employee. This observation must be carried out at consecutive intervals of 2 hours or less. If any change in the condition of the above three items is observed, additional hand brakes must be applied as indicated in (g), using the next grade column which requires an increased number of hand brakes.

- (ii) When equipment connected to an air source is left unattended, where air pressure is maintained by continuous operation or auto start:

- at least the minimum number of hand brakes as indicated in (g) must be applied and tested for effectiveness;
- the air brake system must be sufficiently charged to ensure proper brake application;
- the equipment must be left with air brakes applied; and
- the independent brake on the controlling locomotive must be fully applied.

In addition, at least one of the following securement methods must be used:

- derails;
- track where rail physically ends;
- a Mechanical Emergency Device;
- bowled terrain as identified in special instructions; or
- a locomotive equipped with roll-away protection.

When rollaway protection is used as an additional means of securement, the proper authority must be notified. One of the following means of verification must be used to ensure the rollaway protection remains operational:

- When automatic notification is used, it must notify the proper authority when rollaway protection has been activated, who must arrange for prompt inspection.
- In the absence of the above, an employee must verify that air pressure is maintained, and a penalty brake application has not occurred. This verification must be carried out at consecutive intervals of 18 hours or less.

If air pressure cannot be maintained, notify the proper authority, and secure the equipment per (a)(i).

(b) Non-Main Tracks (Excluding Subdivision Track, Sidings, Yards and High Risk Locations)

When equipment is left unattended, a sufficient number of hand brakes must be applied and tested for effectiveness. Unless otherwise indicated in special instructions, apply a minimum number of hand brakes as indicated in (g).

(c) Yard Tracks

When equipment is left unattended in a yard track, to prevent equipment from moving unintentionally, it must be secured by using at least one of the following:

- hand brakes; unless otherwise indicated in special instructions, a minimum number applied as indicated in (g) and tested for effectiveness;
- bowled terrain;
- retarders;
- wheel chocks or skates;
- air brakes, not connected to an air source, for up to 2 hours when:
 - (i) there are 10 or more cars;
 - (ii) the air brake system is sufficiently charged to ensure proper brake application;
 - (iii) the brake pipe is fully vented at a service rate or has an emergency brake application;and

(iv) on freight equipment, the angle cock is left fully open.

If required to be left longer, an employee must observe that the equipment has not moved, the air brake pistons remain extended, and the hand brakes (when used) are still applied. Such results must be communicated to another employee. This observation must be carried out at consecutive intervals of 2 hours or less. If any change in the condition of the above items is observed, hand brakes must be applied as indicated in (g); or

- air brakes, connected to an air source, where air pressure is maintained by continuous operation or auto start, and a Mechanical Emergency Device is used.

(d) Exceptional weather situations, such as high winds or other unusual conditions, must be factored when determining securement requirements. In addition, previously secured equipment may require additional means of securement. Special instructions may contain location specific requirements where extreme weather events are prevalent.

(e) When advised that trespasser(s) or emergency responder(s) have been in contact with unattended equipment, the person responsible for the territory must make arrangements to have an employee verify the equipment remains secured without delay.

(f) When sudden or unforeseen circumstances do not permit the full application of the requirements of paragraphs (a) or (b), the proper authority must be promptly advised of what

action was taken to secure the equipment, and to determine if additional action can be taken prior to leaving equipment unattended.

(i) These circumstances are limited to when:

- a mechanical defect is encountered enroute;
- equipment is derailed or coupled to derailed equipment; or
- separation is required for clearing a crossing for emergency vehicles.

(ii) Additional actions:

- When equipment with a mechanical defect is required to be left, and does not permit the full application of the requirements of paragraph (a) or (b), add one operative hand brake to the minimum number required, for each defective piece of equipment.
- When a mechanical defect requires equipment to be left, and does not permit the full application of the requirements of paragraph (a) or (b); or cannot be conducted safely, the equipment must be secured by applying hand brakes as indicated in (g), using the next grade column which requires an increased number of hand brakes. Additional hand brakes must be applied if those applied do not prevent the equipment from moving.

The railway company must notify Transport Canada of the time, date, and reason for any application of (f) within 48 hours.

(g) Minimum Number Requirements for Hand Brakes

A single piece of equipment must always be left with the hand brake applied and tested for effectiveness. For two or more pieces of equipment, the following table applies:

Total Trailing Tons:	Average Grade is Equal To or Less Than												
	0.2%	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%	1.6%	1.8%	2.0%	2.2%	2.4%	> 2.4%
0 - 2000	2	2	2	4	6	6	8	10	10	12	12	14	100% Hand Brakes
> 2000 - 4000	2	2	4	6	8	12	14	16	18	20	22	26	
> 4000 - 6000	2	6	6	10	14	16	20	24	28	30	34	38	
> 6000 - 8000	4	6	8	12	18	22	26	32	36	42	46	52	
> 8000 - 10000	4	6	10	16	22	28	34	40	46	52	58	66	
> 10000 - 12000	4	8	12	20	26	34	40	48	56	64	72	80	
> 12000 - 14000	6	8	14	22	30	40	48	58	66	76	84	96	
> 14000 - 16000	6	10	16	26	36	46	56	66	76	88	98	110	
> 16000 - 18000	6	10	18	28	40	50	62	74	86	100	112	126	
> 18000 - 20000	8	12	20	32	44	58	70	84	98	112	128	146	
> 20000 - 22000	8	12	22	36	50	64	78	94	110				
> 22000 - 24000	8	12	24	38	54	70	86	104	122				
> 24000 - 26000	10	14	26	42	58	76	94	112	134				
> 26000 - 28000	10	14	28	46	64	82	104	124	148				
> 28000 - 30000	12	16	30	50	68	90	110	136	162				
> 30000	12	16	34	52	74	96	120	148	172				

113.0 COUPLING TO EQUIPMENT

- Before coupling to equipment, precautions must be taken to prevent the equipment from moving unintentionally.
- When riding the side of equipment, other than a locomotive, detrain prior to making the coupling.
- Before coupling to equipment, ensure at least one knuckle is open.
- Unless otherwise specified in special instructions, before coupling to or moving equipment being loaded or unloaded, all persons in or about such equipment must be notified. Vehicles and loading or unloading devices must be clear.
- Before coupling to or moving service equipment, employees occupying such equipment must be notified and any attachments secured.
- When coupling to passenger equipment, a stop must be made not less than 6 nor greater than 12 feet from the coupling and a speed of 2 MPH must not be exceeded.
- To prevent by-pass couplers when coupling to equipment on other than tangent track, a stop must be made not less than 6 nor greater than 12 feet from the coupling. Extreme caution must then be used, ensuring couplers are properly aligned prior to the coupling being made.
- Coupling must be performed at the lowest speed necessary to make the coupling, not exceeding 6 MPH.
- Prior to leaving, a coupling made with equipment not released under its own momentum must be stretched using sufficient tractive effort to ensure a proper coupling.

113.1 UNCOUPLING FROM EQUIPMENT

- (a) Equipment is considered to be uncoupled once the uncoupling lever has been lifted.
- (b) In a yard, before uncoupling from standing equipment, a sufficient number of hand brakes must be applied, unless one of the methods prescribed by Rule 112 (c) is used.
- (c) Once uncoupled, unless released under its own momentum, the equipment must be observed to ensure it remains where intended.

113.2 MOVING EQUIPMENT AFTER COUPLING

- (a) Equipment must be stretched.
- (b) After stretching, and prior to moving, the equipment must be checked:
 - (i) to ensure it is coupled; and
 - (ii) for applied hand brakes as may normally be expected to be present.
- (c) Unless unintentional movement of the equipment can be prevented with the locomotive brakes, hand brakes must not be released until the air brake system is sufficiently charged and an effective Automatic Brake application made to prevent movement while the hand brakes are being released.

113.3 SWITCHING WITH AIR BRAKES

- (a) Operative air brakes, in addition to the locomotive(s), must be used when switching:
 - (i) on a grade greater than 0.4%; and
 - (ii) with more than 2000 tons.
- (b) Special instructions must indicate:
 - (i) locations where (a)(i) is applicable; and
 - (ii) the minimum number of pieces of equipment, in addition to the locomotive(s), with operative air brakes.

113.4 RESTRICTIONS

Kicking, running switch, and gravity drop are prohibited:

- (a) on a main track;
- (b) on a subdivision track;
- (c) on a siding;
- (d) at a high risk location;
- (e) on any main shop, diesel shop, or car shop track; and
- (f) onto, or with, passenger equipment.

113.5 KICKING EQUIPMENT

- (a) On tracks not listed in Rule 113.4, unless otherwise indicated in special instructions, the kicking of equipment is prohibited. At locations where kicking is permitted:
 - (i) The walking surface of the area where equipment is uncoupled must be clear of obstacles.
 - (ii) The track(s) to be used beyond the area where equipment is uncoupled must be flat, and/or descend in grade, to prevent equipment from rolling back and fouling a track previously cleared.
 - (iii) Equipment must be prevented from exiting the intended track at either end.
 - (iv) Routing must prevent equipment kicked from fouling a main track, siding, subdivision track, or a high risk location. This may include the use of switches, derails, switching leads, or other controlled means.
 - (v) Special instructions will indicate the maximum tonnage that may be kicked at one time, as determined by a Company approved process.
- (b) When hand brakes will be used to control the speed of equipment kicked, such hand brakes must first be verified operational.

- (c) Equipment kicked must not be left foul of the intended route.
- (d) Once equipment is kicked, no additional equipment may be kicked until it has been confirmed that:
 - (i) the route to be used is properly lined, and
 - (ii) equipment previously kicked is clear of the fouling point of the intended route.
- (e) Precautions must be taken to ensure that equipment kicked remains clear.
- (f) When kicking is completed, equipment must be secured per Rule 112(b) or (c).

113.6 RUNNING SWITCH

- (a) It must be verified that the switch and hand brakes are in working order before the move is commenced.
- (b) A running switch must not be made;
 - (i) with or onto occupied equipment;
 - (ii) with or onto equipment placarded to indicate it contains or contained dangerous goods;
 - (iii) where the switch to be used is a dual control, power-operated or spring switch; or
 - (iv) within interlocking limits of a drawbridge or railway crossing at grade.
- (c) At least 3 employees must be utilized when performing a running switch.

113.7 GRAVITY DROP

- (a) It must be verified that the hand brakes, when used, are in working order before the move is commenced.
- (b) A gravity drop must not be made with or onto occupied equipment.

114. FOULING OTHER TRACKS

- (a) Equipment must not be allowed to move foul of another track unless properly protected.
- (b) A movement must not foul a track until the switches connected with the move are properly lined, or in the case of semi-automatic or spring switches, the conflicting route is known to be clear.
EXCEPTION: A movement may foul a track connected by a hand operated switch provided that:
 - (i) neither the track occupied nor the track to be fouled are main tracks;
 - (ii) the conflicting route is known to be clear; and
 - (iii) the switch is properly lined before the movement passes over it.
- (c) Equipment must not be left foul of a connecting track unless the switch is left lined for the track upon which such equipment is standing.

115. SHOVING EQUIPMENT

- (a) When equipment is shoved by an engine or is headed by an unmanned remotely controlled engine, a crew member must be on the leading piece of equipment or on the ground, in a position to observe the track to be used and to give signals or instructions necessary to control the move.
EXCEPTION: A crew member need not be so positioned when the portion of the track to be used is known to be clear. However, equipment not headed by an engine must not approach to within 100 feet of any public, private or farm crossing unless such crossings are protected as described in Rule 103 paragraph (b) or (g).
- (b) Known to be clear is defined as seeing the portion of the track to be used as being clear and remaining clear of equipment and as having sufficient room to contain equipment being shoved. This determination must be made by a qualified employee who can observe the track and has radio contact with the employee controlling the movement. Where a track that has been seen to be clear and no access to that track is possible by another movement, the track may be considered as "known to be clear".

Note: When it can be determined that other movements are not on duty or will not be performing work in the track to be used, the requirement of “known to be clear” can be considered to be fulfilled continuously.

- (c) On main track, when equipment is shoved by an engine or is headed by an unmanned remotely controlled engine, unless protected by a crew member as described in paragraph (a), this move must:
 - (i) have the required authority;
 - (ii) not exceed the overall length of the equipment;
 - (iii) not exceed 15 MPH; and
 - (iv) not be made while the leading car is within cautionary limits.
- (d) Unless the route is known to be clear, when reversing with a locomotive consist and visibility is restricted, a member of the crew must be on the leading end and in position from which signals necessary can be properly given.

RADIO

117. RELIABILITY TESTS

The crew of a movement when equipped with radios must carry out an intra-crew test of such radios before leaving their initial terminal, change-off or starting point. When a movement is equipped with a single radio, it must be voice tested as soon as practicable after the crew commences duty.

118. DEVICES USED IN LIEU OF RADIO

When a communication device is used in lieu of a radio, all radio rules are applicable.

119. CONTINUOUS MONITORING

- (a) When not being used to transmit or receive a communication, receivers must be set to the appropriate standby channel and at a volume which will ensure continuous monitoring. When required to use another channel to perform other duties, at least one radio, when practicable, should be set to the designated standby channel to receive emergency communications.
- (b) The volume of a radio receiver should be kept at a level that will avoid annoyance to the public in passenger cars and station facilities.
- (c) Foremen named in Form Y GBO, TOP or clearance must set their radio to “scan mode” when not being used to communicate with another employee and must otherwise have their radio set to monitor the applicable designated standby channel.

120. RADIO TERMS

- (a) In radio communication the following terms when used will denote:
 - “STAND BY” - Monitor this channel for my next transmission.
 - “OVER” - Transmission is ended and a response is expected.
 - “OUT” - Transmission is ended and no response is expected.
- (b) **OPTIONAL:**
 - Except when radio communication relates to switching operations, when a transmission is complete and a response is expected or required, the transmitting employee must end each transmission with the spoken word “OVER”.

121. POSITIVE IDENTIFICATION

- (a) The person initiating a radio communication and the responding party must establish positive identification. The initial call must commence with the railway company initials of the person

being called.

In addition, when a non-railway company person is calling on a company's channels, they must use their company's name to identify themselves within the initial transmission.

- (b) The person initiating the radio communication must end the initial call with the spoken word "OVER."
- (c) Each party to a radio communication must end their final transmission with the spoken word "OUT."
- (d) When an authority is requested from the RTC or signalman, communication must include the information required for the issuance of the authority.
E.g. name, location, movement designation, required limits, signal number and/or track(s) to be used or entered.

122. CONTENT OF RADIO COMMUNICATIONS

Radio communications must be brief and to the point and contain only essential instructions or information.

123. VERIFICATION PROCEDURES

- (a) When necessary, a repetition, acknowledgement or other response required from a crew member may be checked and confirmed to the RTC by another crew member.
- (b) When GBO, clearances, other authorities or instructions, required to be in writing, are received by radio, they must be verified by the procedures prescribed by their specific rules.
- (c) Except when transmitted by an automated device, or as otherwise provided, when verbal instructions or information affecting the safety of a movement are received by radio, such information must be repeated to the sender.

123.1 RADIO OR HAND SIGNALS

Before changing between radio or hand signals, a definite understanding as to the method of communication must be established between crew members giving or receiving instructions. In case of an emergency, either method may be used in addition to that previously arranged.

123.2 SWITCHING BY RADIO

When radio is used to control switching, and after positive identification has been established, the following procedures are required:

- (i) direction in relation to the front of the controlling locomotive must be given in the initial instruction and from then on whenever the direction is to change;
- (ii) distance to travel must be given with each communication and increments of less than two car lengths need not be repeated;
- (iii) when the movement has travelled one-half the distance required by the last instruction and no further communication is received, the movement must stop;
- (iv) the indication of block and interlocking signals affecting their movement, must be communicated between crew members while switching;
- (v) doubt as to the meaning of an instruction or for whom it is intended must be regarded as a stop signal; and
- (vi) when car lengths are used to communicate distance, unless otherwise arranged, the distance referred to is 50 feet per car length.

125. EMERGENCY COMMUNICATION PROCEDURES

- (a) An employee will transmit the word "EMERGENCY" three times at the beginning of the transmission to indicate the report of;
 - (i) an accident involving injury to employees or others;
 - (ii) a condition which may constitute a hazard to employees or others;

- (iii) a condition which may endanger the passage of movements; or
- (iv) a derailment which has occurred on, or is fouling, a main track.
- (b) When an emergency communication, which is directed to a specific person or movement, has not been acknowledged, any other employee hearing it will, if practicable, relay the communication by any means available. Other employees must not interfere with such communication.
- (c) An emergency communication has absolute priority over other transmissions.

126. RESTRICTED USE OF RADIO

In addition to the restrictions in Rules 14 and 602, radio must not be used to;

- (i) give advance information with respect to the indication of a block or interlocking signal; or
- (ii) give information which may influence a crew to consider that speed restrictions are diminished.

127. CONDUCTING EMERGENCY RADIO TEST

- (a) In order to ensure emergency communication channels are in operation, and to ensure employees are familiar with the emergency procedures, the RTC may contact a crew member of any movement or an engineering field employee and direct them to initiate an emergency test call on their respective RTC channel.
- (b) These tests will be made randomly and employees receiving a request for an emergency test will initiate it on the applicable RTC channel, using the following example for wording:
“Emergency test, Emergency test, Emergency test. ABC 1234 East at mile 12 Canada Sub, testing the Emergency call.”
- (c) Upon completion of the test, the RTC will inform the employee if the test was successful. Employees will then return to their designated standby channel.

GENERAL PROCEDURES

131. RECORDING

- (a) The RTC must maintain indelibly in a book provided for the purpose, or a computer assisted system, a complete record of each GBO, clearance, TOP, authority, instruction and other information that is required to be in writing. The record must be made prior to or during the transmission and never from memory or memoranda, and if required to be sent again, it will be transmitted from the original record. Such records must include original date of issue and acknowledgement(s), when applicable.
- (b) When issuing by voice communication, if an error is detected in the record of a GBO, clearance, TOP, or other authority, and before it has been completed to any employee, the RTC must direct that all copies be immediately destroyed. The record must be marked void. If re-issued, those which require numbering must be given a new number.
- (c) In copying and recording, the spelling of each station name must be exactly as shown in the time table. The RTC, when recording addresses, may use standard station identity letters. Underscoring will be recorded except when verified by a computer assisted system.
- (d) Where a computer assisted system is not in use, all movements authorized by a clearance and all TOP limits must be recorded on a train sheet.

131.1 ELECTRONIC TRANSMISSION AND CANCELLATION

When a GBO, clearance, TOP, other authority, instruction or information is transmitted or cancelled using an ECM and not by voice communication, it will not be repeated to the RTC. When transmitted in this manner, the word "complete" and the initials of the RTC will be generated by the ECM. When cancelled, the initials of the RTC are not required.

132. BREVITY, CLARITY, PRONUNCIATION AND RETENTION

- (a) A GBO, clearance, TOP, authority, instruction and its record shall contain only essential information. It must be brief, but clear in its meaning, in the prescribed form when applicable, and without erasure or any condition which may render it difficult to read or understand.
- (b) In transmitting and repeating by voice communication, all words and numbers must be clearly pronounced. When the communication is required to be in writing, numbers will be pronounced in full, then repeated stating each digit separately. Numbers represented by a single digit must be pronounced, then spelled.
- (c) The employee transmitting or repeating communications required to be in writing must regulate the speed of transmission to allow compliance with this rule.
- (d) When an accident or incident occurs, all authorities, GBO or written instructions must be retained until relieved of this requirement by a supervisor.
- (e) When a clearance, TOP or other written instruction or authority is fulfilled, cancelled or superseded;
 - (i) where applicable, other employees must be advised; and
 - (ii) except when displayed electronically:
 - an "X" must be immediately drawn across it to avoid further use; or
 - when contained within a book, must be marked with a single diagonal line drawn across the page to indicate that it is no longer active and a second diagonal line forming an "X" will be drawn across the page when there are no preceding active items.

133. NUMBERING

Except where numbering is controlled by computer, each RTC desk in a multiple desk office and desks controlling adjacent territories will use a separate series from other desks for numbering a

GBO, clearance, TOP, authority, instruction or other information which requires numbering. Unless otherwise provided each series must be numbered consecutively using whole numbers. All numbers in a series may be preceded or followed by a letter(s). Duplicate numbers must not be in effect at the same time.

134. DESIGNATION OF MOVEMENTS

- (a) GBO, clearance or other authority, will be addressed to those who are to execute and observe them. Addresses will be clear and concise and leave no doubt as to whom they are addressed.
- (b) In the body of a GBO or other authority where positive identification is required, the engine number must be included in the designation.
- (c) When the locomotive number is used in the designation, it must, when practicable be the leading locomotive. The number lights of the designated locomotive only will be illuminated at all times.

135. EMPLOYEES ADDRESSED

A GBO, clearance or other authority addressed to a movement must be regarded as being addressed to the conductor and locomotive engineer and also to the pilot or snow plow foreman, if any. A crew member copying a GBO or clearance must ensure that those addressed receive a copy.

OPTIONAL A single copy may be made when all crew members are located in the same operating cab and such authority is visible and accessible to all crew members.

136. COPYING, REPEATING, COMPLETING AND CANCELLING

- (a) The employee copying a GBO, clearance, TOP or other authority from the RTC or the cancellation of same, must copy as it is transmitted and repeat from the copy received all applicable written and pre-printed portions. The spelling of each station name must be exactly as shown in the time table.
- (b) GBO, authorities or instructions must not be copied by the employee operating moving equipment or track units, if it will interfere with the safe operation of such equipment or track unit.
- (c) The RTC must verify each written word and digit each time it is repeated. If correct, the RTC will respond "complete" and the initials of the RTC, which will be recorded and acknowledged by the employee copying. The employee copying must acknowledge by repeating "complete" and the initials of the RTC to the RTC.
- (d) When transmitted by voice communication direct to the crew of a movement, it must not be completed until each crew member copying has correctly repeated it.

137. FOREMAN'S INSTRUCTIONS

Instructions from a foreman must be in writing except when the instructions permit unrestricted operation through the entire limits.

138. FOREMAN'S INSTRUCTIONS (OPTIONAL)

Instructions from a foreman must be in writing.

139. BECOMING EFFECTIVE

A GBO, clearance, TOP or other authority becomes effective at the moment the word "complete" and initials of the RTC are given by the RTC. However, the RTC must not take further action if there is a restriction contained therein until acknowledged by the employee copying.

140. CHANGES AFTER BECOMING EFFECTIVE

Changes must not be made to a GBO, clearance, TOP or other authority after becoming effective, except when;

- (i) an address is added to a GBO, the number and the applicable portion of the GBO address must be repeated to and verified by the RTC;
- (ii) a time or location to call the RTC is indicated on a clearance, TOP or other authority, such time or location may be changed as required. When so changed, the employee copying must draw a line through the previous time or location;
- (iii) a computer assisted system is used to issue GBO, the effective time and/or date may be removed from the GBO in the system after the effective time, and in the application of Rule 43 instructions in the GBO stating "signals may not be in place" may be removed after the foreman confirms that signals have been placed;
- (iv) speed is changed, the employee copying must draw a line through the current and replace with the revised. The GBO number and revised speed must be repeated to and acknowledged by the RTC; and
- (v) a computer-assisted system is used, the limit(s) of a TOP may be changed as required, the employee copying must draw a line through the current location(s) and replace with the revised. The TOP number and revised limits must be repeated to and acknowledged by the RTC.

141. MAKING ADDITIONAL COPIES

- (a) When additional copies of a GBO, clearance, TOP or other authority are required, they may be received from the RTC or made from one previously completed. Such copies must be repeated to the RTC from the new copy except when received from an ECM or reproduced by a duplicating device.
- (b) An employee producing or reproducing a copy for delivery to another employee must check each copy to ensure legibility.

142. UNDERSTANDING BETWEEN CREW MEMBERS

- (a) Every conductor, locomotive engineer, pilot and snow plow foreman must read and have a proper understanding of all GBO and clearances as soon as possible after they have been received. Each must be made available to other crew members, as soon as practicable, ensuring that each crew member has read and understands them and, when required, the arrangements for protection between crews and between foremen and crews.
- (b) Crew members within physical hearing range are required to remind one another of the restrictions contained in GBO and clearances in sufficient time to ensure compliance.

143. GBO NUMBERS ON CLEARANCE

When specified in special instructions, the number of each GBO in effect at the time the clearance is issued, which will affect the movement on each subdivision or on the entire trip, will be shown on the first clearance sent to that crew. When there are no GBO for that movement, the word "nil" will be shown.

147. TRANSFER BETWEEN CREWS

- (a) When a conductor, locomotive engineer or both are changed off, or relieved, all GBO, DOB, clearances, authorities, TGBO and other written instructions and all necessary information still in effect must be transferred personally to the relieving crew. The transfer of information must be known to be understood by the relieving employee(s).
- (b) When it is not practicable to carry out a personal transfer, crews relieved of duty on line must contact the RTC as to the disposition of all documentation and authorities held for their movement. If documentation is to be left at any point for the relieving crew, a list of the items

transferred must be prepared and signed by the crew member(s) going off duty. The relieving crew must compare all pertinent information with the RTC before proceeding.

- (c) The relieving crew of a movement that has been tied up on line must contact the RTC to ensure that there are no restrictions against moving any portion of their movement. In addition when taking control of a movement occupying a CTC controlled track, if unable to ascertain the last signal indication for their movement, RESTRICTED speed applies to the next signal.
- (d) Verbal instructions received from a foreman must not be transferred between crews. The relieving crew must contact the foreman and obtain the necessary authority and/or instructions.

148. PERSONAL TRANSFER BETWEEN RTC

- (a) Where an ECM is used or where a computer assisted system generates a list as defined in paragraph (b), the relieving RTC must sign into the system in the presence of the on-duty RTC, and receive verbal and/or written transfer of other necessary instructions and information.
- (b) Except as prescribed in paragraph (a), before being relieved, an RTC must make an indelible list in a book provided for the purpose, of GBO, TOP, clearances, and other authorities in effect:
 - (i) Each such record must have been read, understood and initialled by the relieving RTC.
 - (ii) Other necessary instructions and information must also be transferred.
 - (iii) Both RTC must sign the transfer and the relieving RTC will record the time the transfer is completed.

GENERAL BULLETIN ORDER (GBO)

151. IDENTICAL MEANING TO ALL

The body of each GBO must be given in the same words and figures to each employee and movement addressed.

152. DELIVERY OF GBO

The RTC must ensure that movements affected by a GBO are issued a copy of the GBO, or are otherwise secured.

153. CONFIRMATION TO A FOREMAN

Confirmation of protection must not be given to a foreman until all movements affected have received a copy of the GBO or are otherwise secured.

154. REMAIN IN EFFECT

GBO remain in effect for the entire tour of duty unless cancelled. GBO must be retained at away from home locations to be available, if required, for the return trip.

155. CANCELLING GBO

- (a) To cancel an item of a GBO, the RTC will use the following:
Item _____ of GBO _____ is cancelled _____ (RTC).
- (b) To cancel a GBO, the RTC will use the following:
GBO _____ is cancelled _____ (RTC).
- (c) The cancellation must be repeated to, and acknowledged by, the RTC.

156. DAILY OPERATING BULLETIN (DOB)

- (a) Except as provided for in paragraph (b), a movement must not move on any track where DOB is applicable unless it is in possession of:
 - (i) the current DOB; or
 - (ii) a TGBO which is applicable within the portion of the limits of the DOB over which the movement will operate.
- (b) The DOB will take effect at the time specified and will remain in effect until the same time the following day. A crew of a movement within DOB limits unable to clear the limits before the DOB expires, or unable to obtain a copy of the next current DOB, must contact the RTC. In such circumstances, the DOB may be extended by the RTC with any necessary changes. If unable to communicate with the RTC, the movement must be stopped.
- (c) All crew members must verify that the DOB is properly dated, and it contains the correct number of pages.
- (d) The RTC will ensure that the information or instructions contained in each GBO, pertaining to track or other conditions within such limits, is correct and placed in the appropriate DOB.

157. TABULAR GENERAL BULLETIN ORDER (TGBO)

- (a) A movement must not move on any track where TGBO is applicable, unless it is in possession of a TGBO addressed to them.

OPTIONAL: Overlapping TGBO and DOB Limits. Movements required to operate outside of DOB limits must operate their entire trip with a TGBO addressed to them unless authorized by the RTC or by special instructions.

- (b) All crew members must ensure that their movement is properly designated on their TGBO, it contains the correct number of pages and that the limits cover the specific routing. If an incorrectly designated TGBO is received or there is no TGBO for that movement the RTC must be contacted immediately.
- (c) When designated using the movement identification number, the train journal, list or other acceptable document may be used for verification. If the designation on the TGBO is incorrect, a change of designation must be issued by the RTC. If the designation of the train journal, list or other acceptable document is incorrect while the TGBO designation is correct, the designation on the train journal, list or other acceptable document may be changed when authorized by the RTC, a company officer or other employee who has access to the correct information. When a train journal, list or other acceptable document is not available, a member of the crew may obtain the correct designation of the movement for comparison to the TGBO from the RTC, Company Supervisor or other employee who has access to this information.
- (d) A crew of a movement within TGBO limits with a TGBO that includes an item that cancels the TGBO at a specific time, must communicate with and be governed by instructions of the RTC before the expiry time. If unable to communicate with the RTC and unable to clear TGBO limits, the movement must be stopped.

FORMS OF GBO

The following examples of GBO will be used where applicable. Times, mileages and speeds shown in MPH will be in numbers only.

FORM S - MAIN TRACK OUT OF SERVICE

- (1) ***Main track out of service between siding switches at Whitney. Switches lined and secured for siding. Movements will operate through siding in accordance with Rule 105.***
- (2) ***Main track out of service between main track switches at mile 11.3 and mile 12.1 Canada Sub, Baker Industrial Track. Switches lined and secured for this track. Movements will operate through Baker Industrial Track in accordance with Rule 105.***

When a foreman has received confirmation in writing that the GBO is in effect, impassable main track, between the switches of the siding or other tracks, may be protected in the manner prescribed by Rule 841. Before Form S is issued, any derail on such track must be secured in the non-derailing position or removed from the rail.

FORM T - EQUIPMENT LEFT ON MAIN TRACK

- (1) ***Unattended equipment occupying main (No 4) track between mile 9 and mile 11 Maple Leaf Sub.***

Example (1) will be used to provide permission to leave and provide protection for equipment occupying the main track between the designated points. Equipment must be left between the designated points.

- (2) ***Derailed equipment obstructing main (east) track (No 1 track and No 2 track) between mile 28 and mile 29 Beaver Sub.***

Example (2) will be used to protect derailed equipment on the main track or obstructing a main track.

The crew of a movement receiving examples (1) or (2) must proceed prepared to stop short of such equipment.

FORM V - SPECIFYING SPEED

- (1) ***Do not exceed 10 MPH between mile 15 and mile 20 (at mile 19.4) (on east track) Canada Sub.***

This example will be used with Rule 43 protection, or for other conditions requiring a reduction in movement speed not covered by example (2) or (3). When required, the GBO must specify the track, or tracks, upon which the restriction applies.

- (2) ***Do not exceed 30 MPH while handling _____.***

This example may be used when it is necessary to restrict the speed of specific equipment.

- (3) ***Do not exceed 20 MPH entering public crossing at grade mile 43.5 Beaver Sub until crossing fully occupied.***

This example must be used to restrict the speed of movements entering a public crossing at grade.

FORM Y - PLANNED PROTECTION

Form Y will be used to provide protection as prescribed by Rule 42.

Be governed by Rule 42 on Nov 30th from 0800 until 1700 between mile 10 and mile 12(on east track) Canada Sub Foreman _____.

Note: This form may be modified for daily or other exceptional usage. E.g. daily from 0800 until 1700.

When required, the GBO must specify the track, or tracks, upon which the restriction applies.

OCCUPANCY CONTROL SYSTEM (OCS) RULES

301. APPLICATION AND SUPERVISION

- (a) On subdivisions, portions of subdivisions or other tracks specified in special instructions, movements will be governed by Occupancy Control System (OCS) Rules.
- (b) The RTC will supervise OCS territory by means of clearances, TOP, GBO and other instructions as may be required.

302. CLEARANCE REQUIRED

- (a) Except within cautionary limits, a train or transfer must be authorized by a clearance to foul or enter a track where OCS rules are applicable.
- (b) A clearance will be sent direct to the crew of the train or transfer addressed. Before the clearance is acted upon the conductor and locomotive engineer must, as soon as possible, ensure that each is in possession of the clearance and their train or transfer is correctly designated. Engine number must be verified visually to ensure correctness.

302.1 CLEARANCE IN EFFECT

A clearance remains in effect until fulfilled, superseded or cancelled.

Clearances that authorize a train or transfer to proceed, unless cancelled, must be fulfilled in the order in which they are issued on that subdivision.

302.2 SUPERSEDING A CLEARANCE

- (a) A clearance may be issued superseding a clearance already in possession of the crew of the train or transfer addressed.
- (b) When superseding a clearance that includes limits the train or transfer is occupying, the superseding clearance must include that section of track and must not include a requirement to wait until the arrival of an opposing train or transfer.
- (c) If a superseding clearance restricts the authority already in possession of the train or transfer addressed, the RTC must not take further action until it has been acknowledged by the conductor and locomotive engineer.

302.3 CANCELLING CLEARANCE

- (a) Before a clearance is cancelled, the train or transfer addressed must be;
 - (i) clear of the limits;
 - (ii) protected by Form T GBO; or
 - (iii) within cautionary limits.
- (b) When a clearance is cancelled, the cancellation does not take effect until it has been acknowledged by the conductor and locomotive engineer. These employees must acknowledge by repeating the clearance number, "cancelled" and initials of the RTC to the RTC.

303. PROTECTION AGAINST FOLLOWING TRAINS OR TRANSFERS

- (a) A combination of trains or transfers to a limit of two may each be authorized to proceed in the same direction, within the same limits, provided that each is instructed on its clearance to protect against the other. Before either moves within the limits stated, the conductor and locomotive engineer of each train or transfer must have a thorough understanding, in writing, as to the specific operation of each train or transfer and the protection to be provided. If communication fails between the trains or transfers affected, no moves shall be made other than those which were last arranged.

(b) **WITHIN ABS TERRITORY**

With the protection of at least two block signals to the rear, two or more trains or transfers may be authorized to proceed in the same direction within the same limits governed by block signal indications.

303.1 RADIO PROTECTION AGAINST FOLLOWING TRAINS AND TRANSFERS

(Not applicable to trains or transfers in possession of a work clearance)

Where specified in special instructions, protection against following trains and transfers will be provided as follows:

- (a) The RTC must not authorize a train or transfer to follow a preceding train or transfer until the crew of the following train or transfer has been restricted by its clearance as follows;
“Protect against (preceding train or transfer) from (location)”.
- (b) Except as provided in paragraph (d), a train or transfer so restricted must not leave the location named nor leave any identifiable location until the preceding train or transfer has reported that it has left an identifiable location ahead. This report must be recorded in writing by a crew member of the following train or transfer. Such information may be received from the RTC. Identifiable locations as listed in Rule 82 must be used. Under circumstances in which a report is not received from the preceding train or transfer, the following may operate at REDUCED speed to a maximum speed of 25 MPH.
- (c) A train or transfer so restricted must not pass the preceding train or transfer.
- (d) When the preceding train or transfer has stopped, arrangements may be made with the following train or transfer to “close up”. These arrangements must be made in writing between the crews of both trains or transfers. When the preceding train or transfer resumes moving, the following train or transfer will be governed by paragraph (b).
When the preceding train or transfer has left the location to which the following train or transfer is authorized, Rule 303.1 no longer applies.

304. RESTRICTION BEFORE LEAVING

When a train or transfer has been restricted by clearance, such train or transfer must not leave the point named until it is positively known that the opposing train(s) or transfer(s) named on the clearance have arrived.

A train or transfer has not arrived until its designated engine and marker have arrived.

Trains or transfers operating without a marker have not arrived until confirmed by direct communication with a member of the crew of such train or transfer.

If unable to observe the arrival of a train or transfer, or unable to communicate with a member of the crew, the RTC must be contacted.

304.1 STOPPING CLEAR OF FOULING POINT

A train or transfer required to stop at a meeting, clearing or waiting point, or at the end of authority, must be stopped clear of the route to be used by another train or transfer.

305. BEFORE ISSUING CLEARANCE AUTHORITY

Before issuing clearance authority, the RTC must provide protection against all conflicting trains, transfers and TOP within the limits stated.

306. TRACK USE

In multi-track OCS, a clearance must specify the track(s) to be used.

308. WORK CLEARANCE AUTHORITY

- (a) When authorized to work by clearance a train or transfer may move in either direction within the limits named in the clearance.

- (b) A work clearance remains in effect until superseded or cancelled.

308.1 CHANGING DIRECTION – PROCEED CLEARANCE

Unless otherwise provided by rules or special instructions, when authorized to proceed by clearance, a train or transfer must move only in the specified direction.

Provided the track to be operated over has not been released or a block in ABS is not re-entered, a train or transfer authorized by clearance to proceed may reverse a distance of 300 feet or less. In ABS a crew member must be in position to see the section of track to be used is clear and will remain clear of equipment or a track unit.

309. MOVING THROUGH WORKING LIMITS

- (a) To enter or move within the working limits of one or more trains or transfers, a train or transfer must be restricted by its clearance as follows: "Protect against Work 5748 (and Work 9460) between Exeter and Jasper."
- (b) A train or transfer must not enter nor move within the working limits until a thorough understanding is established with the conductor and locomotive engineer of each work train or transfer. Such understanding must be in writing and include information with respect to the specific operation of each train and transfer and the protection to be provided. Such protection must be provided until the train or transfer has left the working limits.

310. MULTIPLE WORK AUTHORITIES

- (a) Two or more work authorities may be issued within the same or overlapping limits. Each train or transfer must be restricted by its clearance to protect against each other.
- (b) Conductors and locomotive engineers authorized to work must have a thorough understanding, in writing, as to the specific operation of each work train or transfer and the protection to be provided.

311. PROTECTING AGAINST A FOREMAN

- (a) A train or transfer must not be authorized to enter or move within the limits of a TOP until it has been restricted as follows:
"Protect against foreman (name) between (location) and (location)."
- (b) The train or transfer must not enter, nor move within, the TOP limits until instructions have been obtained from the foreman named on the clearance. These instructions must be repeated to, and acknowledged by, the foreman before being acted upon.

314. OPTIONAL TO 309 AND 310: PROCEEDING THROUGH OR WORKING WITHIN WORK TRAIN OR TRANSFER LIMITS

- (a) A train or transfer may be authorized to proceed through or work within the limits of one or more trains or transfers authorized to work, provided such train or transfer is restricted by its clearance as follows;
"Protect against work (number) between (location) and (location)"
- (b) A train or transfer must not enter nor move within the working limits until a thorough understanding is established with the conductor and locomotive engineer of each train or transfer authorized to work. Such understanding must be in writing and include information with respect to the intended operation of each train or transfer and the protection to be provided. Such protection must be provided until the train(s) or transfer(s) has left the working limits.

315. RADIO BROADCAST REQUIREMENTS

- (a) A member of the crew on all trains and transfers must initiate a radio broadcast to the airwaves on the designated standby channel 1 to 3 miles from the next station or interlocking. This

- broadcast must include the next requirement to protect against another train, transfer or foreman if the restriction is between the upcoming station and the next station or interlocking.
- (b) A member of the crew located on other than the engine must confirm that the radio broadcast has been made in accordance with (a). If unable to contact the engine crew to ascertain this information, immediate action must be taken to stop the movement before it will reach the next point of restriction.

SPECIAL CONTROL SYSTEM (SCS) RULES

351. APPLICATION

On portions of the railway so specified by special instructions, the use of the main track will be governed by the Special Control System.

352. SUPERVISION

Movements and track work protection will, unless otherwise provided, be supervised by the RTC who will issue instructions as may be required.

353. SCS SPECIAL INSTRUCTIONS

Special instructions necessary to govern this method of operation will be issued. Except as affected by such instructions and Rules 351 and 352, all Operating Rules remain in force.

SIDING CONTROL TERRITORY (SCT) RULES

360. APPLICATION

Where specified by special instructions, the use of non-signalled sidings within CTC will be governed by the Siding Control Territory rules.

361. SUPERVISION

Movements, protection of track work and operation of track units will, unless otherwise provided, be supervised by the RTC who will issue instructions as may be required.

362. CLEAR OF EQUIPMENT

- (a) Sidings will be considered as clear of equipment unless otherwise informed by the RTC.
- (b) Before permitting a movement to enter a siding occupied by other equipment, the RTC must advise a member of the crew that other equipment occupies such siding.

363. HAND OPERATED SWITCHES

Hand operated switches in sidings may be considered lined for the normal position unless advised otherwise by the RTC, GBO or special instruction.

364. PROTECTION OF TRACK WORK AND OPERATION OF TRACK UNITS

A foreman must be in possession of a TOP for the protection of track work and operation of track units. Rule 41/841 is not applicable.

GENERAL DESCRIPTION AND LOCATION OF FIXED SIGNALS

401. LOCATION

Wherever practicable, fixed signals other than switches will be located above, or to the right of, the track they govern. Where circumstances require that signals be otherwise placed, such conditions will be indicated by GBO or special instructions.

EXCEPTION: A block or interlocking signal that is required to be placed to the left of the track it governs need not be indicated by GBO or special instructions, provided that such location does not place the signal to the right of another signalled track.

401.1 SIGNAL DISPLAYED

The indications displayed on block and interlocking signals govern operation to the next signal or block end sign. Except as otherwise specified in special instructions, a signal to leave the main track to enter non-main track applies to the block end sign or until the leading end of the movement has passed entirely through the controlled location and entered non-main track. Speed requirements protecting turnouts must be complied with until the entire movement has cleared the turnout.

401.2 NO ADVANCE SIGNAL

At locations where there is no advance signal to the signal governing movements into CTC or movements are re-entering CTC from a siding, all movements must approach the governing signal preparing to stop until it can be observed as displaying a more favourable indication than Stop.

402. POSITIONING

Where conditions allow, block and interlocking signal heads will be positioned with respect to the tracks on which they affect movements. Bridges, cantilevers, dummy masts and other structures will be used and must be illustrated in company instructions to ensure proper understanding or signal intent.

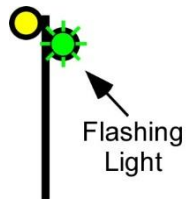
403. APPEARANCE OF COLOUR LIGHT SIGNALS

- (a) Block and interlocking signal aspects will be displayed by the colour, position, flashing of lights, or combinations thereof.
- (b) The indications of any such signal may be qualified or modified by an attached arrow and/or plate(s).
- (c) Lights may be attached to either side of the signal mast and number plates may be provided for the purpose of identifying the location.

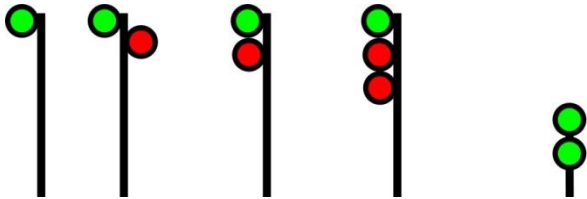
404. STANDARD INDICATIONS

The illustrations in Rules 405-440 are standard aspects and indications. Other signal aspects and indications necessary will be illustrated in special instructions.

BLOCK AND INTERLOCKING SIGNALS

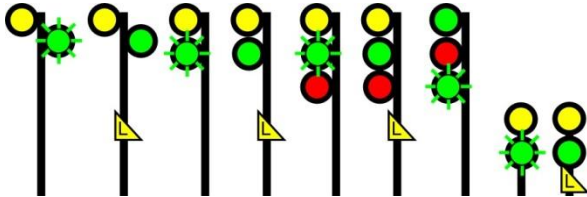


405.



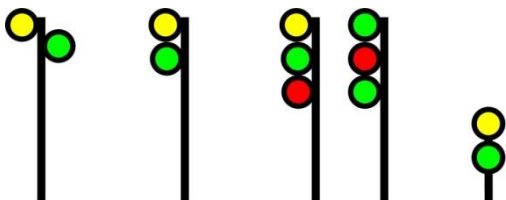
Clear - Proceed.

406.



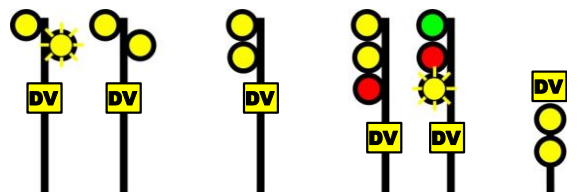
Clear to Limited - Proceed, approaching next signal at LIMITED speed.

407.



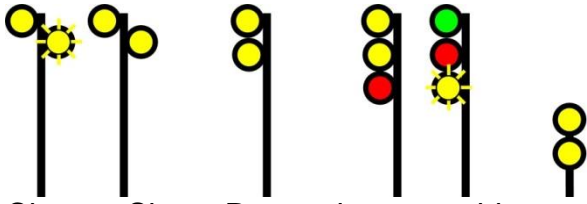
Clear to Medium - Proceed, approaching next signal at MEDIUM speed.

408.



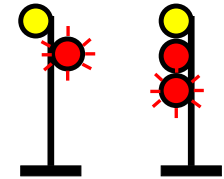
Clear to Diverging - Proceed, approaching next signal at DIVERGING speed.

409.



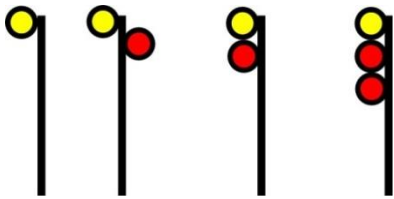
Clear to Slow - Proceed, approaching next signal at SLOW speed.

410.



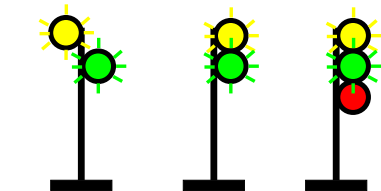
Clear to Restricting - Proceed, next signal is displaying restricting signal.

411.



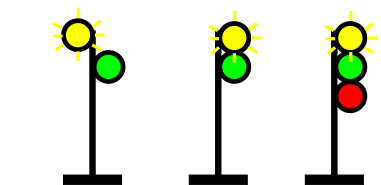
Clear to Stop - Proceed, preparing to stop at next signal.

412.



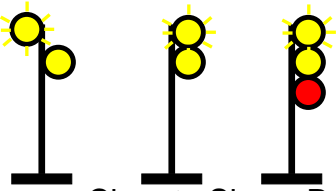
Advance Clear to Limited - Proceed, approaching second signal at LIMITED speed.

413.



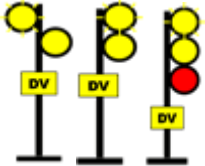
Advance Clear to Medium - Proceed, approaching second signal at MEDIUM speed.

414.



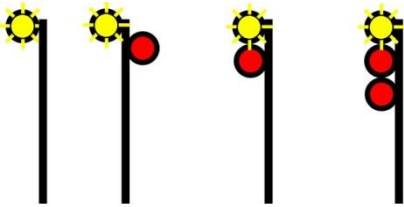
Advance Clear to Slow - Proceed, approaching second signal at SLOW speed.

414A.



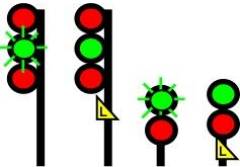
Advance Clear to Diverging - Proceed, approaching second signal at DIVERGING speed

415.



Advance Clear to Stop - Proceed, prepared to Stop at second signal.

416.



Limited to Clear - Proceed, LIMITED speed passing signal and through turnouts.

417.



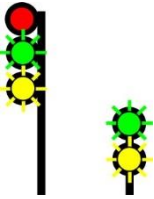
Limited to Limited - Proceed, LIMITED speed passing signal and through turnouts, approaching next signal at LIMITED speed.

418.



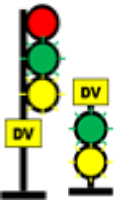
Limited to Medium - Proceed, LIMITED speed passing signal and through turnouts, approaching next signal at MEDIUM speed.

419.



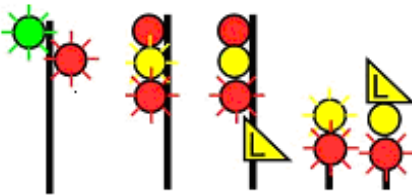
Limited to Slow - Proceed, LIMITED speed passing signal and through turnouts, approaching next signal at SLOW speed.

419A.



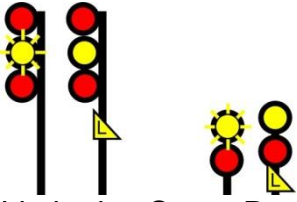
Limited To Diverging - Proceed, LIMITED speed passing signal and through turnouts, approaching next signal at DIVERGING speed.

420.



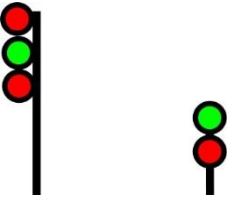
Limited to Restricting - Proceed, LIMITED speed passing signal and through turnouts, next signal is displaying restricting signal.

421.



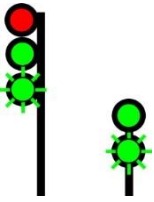
Limited to Stop - Proceed, LIMITED speed passing signal and through turnouts, preparing to stop at next signal.

422.



Medium to Clear - Proceed, MEDIUM speed passing signal and through turnouts.

423.



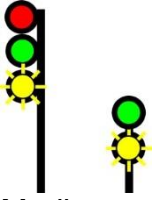
Medium to Limited - Proceed, MEDIUM speed passing signal and through turnouts, approaching next signal at LIMITED speed.

424.



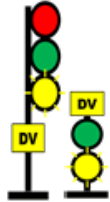
Medium to Medium - Proceed, MEDIUM speed passing signal and through turnouts, approaching next signal at MEDIUM speed.

425.



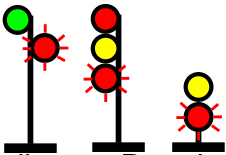
Medium to Slow - Proceed, MEDIUM speed passing signal and through turnouts, approaching next signal at SLOW speed.

425A.



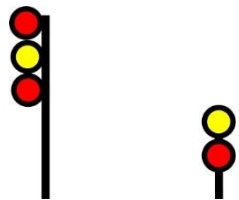
Medium to Diverging - Proceed, MEDIUM speed passing signal and through turnouts, approaching next signal at DIVERGING speed.

426.



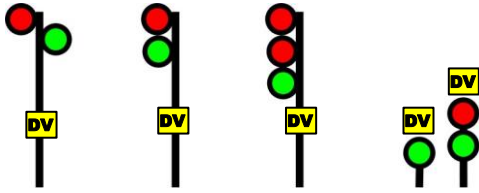
Medium to Restricting - Proceed, MEDIUM speed passing signal and through turnouts, next signal is displaying restricting signal.

427.



Medium to Stop - Proceed, MEDIUM speed passing signal and through turnouts, preparing to stop at next signal.

428.



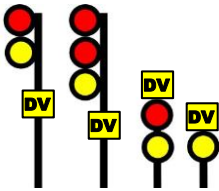
Diverging to Clear - Proceed, DIVERGING speed passing signal and through turnouts.

429.



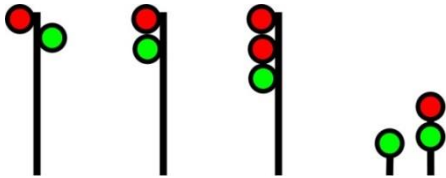
Diverging to stop - Proceed, DIVERGING speed passing signal and through turnouts preparing to stop at next signal.

430.



Diverging - Proceed at REDUCED speed, not exceeding DIVERGING speed passing signal and through turnouts.

431.



Slow to Clear - Proceed, SLOW speed passing signal and through turnouts.

432.



Slow to Limited - Proceed, SLOW speed passing signal and through turnouts, approaching next signal at LIMITED speed.

432A.



Diverging to Limited - Proceed, DIVERGING speed passing signal and through turnouts, approaching next signal at LIMITED speed.

433.



Slow to Medium - Proceed, SLOW speed passing signal and through turnouts, approaching next signal at MEDIUM speed.

433A.



Diverging to Medium - Proceed, DIVERGING speed passing signal and through turnouts, approaching next signal at MEDIUM speed.

434.



Slow to Slow - Proceed, SLOW speed passing signal and through turnouts, approaching next signal at SLOW speed.

434A.



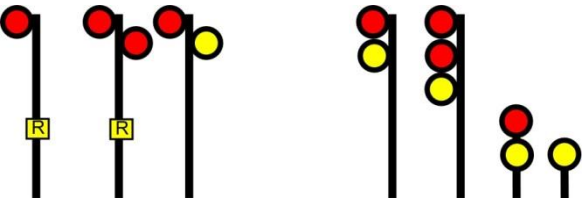
Diverging to Diverging - Proceed, DIVERGING speed passing signal and through turnouts, approaching next signal at DIVERGING speed.

435.



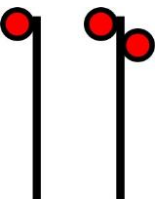
Slow to Stop - Proceed, SLOW speed passing signal and through turnouts, preparing to stop at next signal.

436.



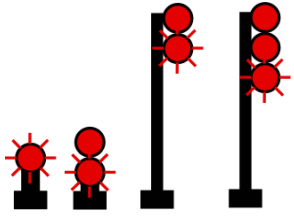
Restricting - Proceed at RESTRICTED speed.

437.



Stop and Proceed - Stop, then proceed at RESTRICTED speed.

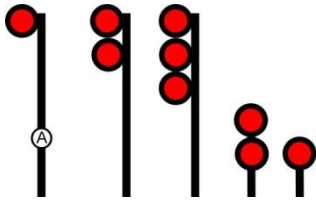
438.



Take or Leave Siding or Other Track

Indications will be specified in special instructions for each specific application of this signal.

439.



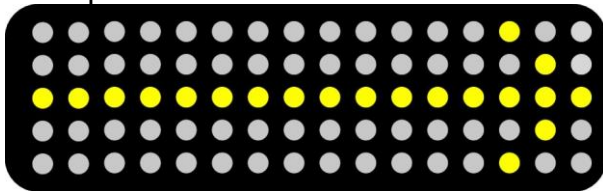
Stop - Stop.

OPTIONAL: Unless required to clear a switch, crossing, controlled location, or spotting passenger equipment on station platforms, a movement not authorized by Rule 564 must stop at least 300 feet in advance of the STOP signal.

440. DIRECTION INDICATOR

Flashing arrow indicators used in conjunction with block signals when illuminated, identify that the route at the next controlled location is displaying a permissive signal and the route is lined and secured as indicated by the direction of the arrow.

Example:



AUTOMATIC BLOCK SIGNAL SYSTEM (ABS) RULES

505. APPLICATION

Block signals govern the use of the blocks. They do not dispense with the use or observance of other signals whenever and wherever required and do not authorize main track occupancy.

507. WITHDRAWAL OF SIGNALS

When signals in ABS are withdrawn from service, movements will be governed by instructions from the RTC or special instructions.

509. INSTRUCTIONS TO PASS SIGNAL INDICATING STOP

- (a) A movement must have instructions from the RTC to pass a block signal indicating Stop. If stopped at the signal indicating Stop, and no conflicting movement is evident, a crew member must immediately communicate with the RTC.
EXCEPTION: Instructions are not required when a movement is required to re-enter a block occupied by a portion of their movement, however, the movement must proceed at REDUCED speed.
- (b) When able to, the RTC will inform the crew member in writing:
“There is no conflicting movement” After complying with Rule 513 where applicable, the movement need not stop at the signal but must positively identify the signal by number and the movement may proceed at RESTRICTED speed to the next signal or Block End sign.
- (c) When unable to obtain the information that there is no conflicting movement in the block, and no conflicting movement is evident, the movement may, after complying with Rule 513 where applicable, move forward and must stop where its leading wheels are 100 feet past the Stop signal. After waiting 10 minutes and if there is still no evidence of a conflicting movement, the movement may proceed at RESTRICTED speed to the next signal or Block End sign.

513. ENTERING MAIN TRACK

- (a) Before entering or fouling a main track and no movement is observed approaching on the main track, a crew member must reverse the switch and wait five minutes, unless a greater period is specified in special instructions before allowing the movement to move foul of the main track. The crew member must remain at the switch until the movement has entered the track. The switch must be quickly restored to its normal position should an approaching movement on the main track become evident.

When entry is to be made through a crossover, the switch in the track on which the movement is standing is the only crossover switch to be reversed for the required waiting period.

EXCEPTION: The required waiting period need not be observed within cautionary limits or when:

- an opposing movement has passed the switch and is still occupying the block;
- the crew entering the main track is in possession of a clearance to work; or
- the crew is relieved in writing by the RTC.

Before relieving a crew, the RTC must ensure that there are no movements operating in the block that will approach the switch. The switch must be opened within 5 minutes after receiving permission from the RTC.

- (b) A movement entering a block between signals, must move at RESTRICTED speed to the next signal, unless or until the track is seen to be clear to the next signal and the indication of such signal permits movement at other than RESTRICTED speed.

515. DELAYED IN THE BLOCK

When a movement, which has entered a block on signal indication permitting operation at other than RESTRICTED speed, is stopped or otherwise delayed in the block, it must move at REDUCED speed to the next signal:

- (i) unless there are no switches between such movement and the next signal; or
- (ii) until the track is seen to be clear to the next signal.

The movement must approach the next signal prepared to stop and be governed by the indication displayed.

CENTRALIZED TRAFFIC CONTROL SYSTEM (CTC) RULES

560. SUPERVISION AND APPLICATION

CTC is applicable in limits specified in the time table or special instructions and will be supervised by the RTC. Block signals will govern the operation of trains or transfers. The RTC will issue instructions as required.

561. CTC SUSPENDED

When all or part of the CTC is withdrawn from service, trains and transfers will be governed by special instructions.

563. CLEARING OPPOSING SIGNALS INTO NON-SIGNALLED SIDINGS

- (a) When two opposing train(s) or transfer(s) are to be lined into the same non-signalled siding, each locomotive engineer must be advised of the fact before the signal to permit operation of either train or transfer into the siding is requested.
- (b) At meeting points, the RTC must not line a train or transfer into a siding until the switch at the opposite end of the siding is set for main track.
Note: This rule is not applicable where automated office control devices will not permit opposing train(s) or transfer(s) to enter a non-signalled siding and at sidings where SCT is in effect.

564. AUTHORITY TO PASS STOP SIGNAL

- (a) A train or transfer must have authority to pass a block signal indicating Stop.
- (b) The RTC may authorize the train or transfer to pass the signal but before doing so must:
 - (i) ensure that there are no conflicting trains or transfers within, or authorized to enter, the controlled block affected (other than one authorized by Rule 567, 567.3 or 577); and
 - (ii) provide protection against all opposing trains or transfers.
- (c) When signal blocking devices are used, they may be removed after the authorized train or transfer has entered the controlled block affected. The RTC must not permit any opposing trains or transfers to enter the controlled block until the authorized train or transfer has cleared such block.
- (d) The train or transfer so authorized need not stop at the signal but must positively identify the signal by number; operate at RESTRICTED speed to the next signal or Block End sign, and must be governed by Rule 104.1 at spring switches, Rule 104.2 at dual control switches, Rule 104.3 at power-operated switches and Rule 611 at automatic interlockings.
- (e) When a known condition prevents clearing of controlled signals into an affected block, the RTC may authorize operation at REDUCED speed to the next signal or Block End sign. The train or transfer will be advised whether or not equipment is present in the block.
REDUCED speed remains applicable unless the block is known to be clear of equipment.
REDUCED speed commences when the leading piece of equipment has passed entirely through the controlled location.

The train or transfer must approach the next signal prepared to stop and there be governed by the indication displayed.

- (f) The authority granted and instructions must be in writing and, where applicable, specify the route to be used. The locomotive engineer must be made aware of the route to be used before moving.

565. STOP SIGNAL CTC TO ABS

A train or transfer leaving CTC and entering ABS, if required to move past a signal indicating Stop, will be governed by Rule 564 within CTC and Rule 509 within ABS.

566. WORK AUTHORITY

- (a) A train or transfer may be given work authority that permits moving in either direction within specified limits.
- (b) Before issuing such authority the RTC must:
 - (i) ensure that there are no other trains or transfers within, or authorized to enter, the required limits; and
 - (ii) block at Stop all devices controlling signals governing other trains or transfers into such limits.
- (c) The RTC must maintain signal blocking against all trains or transfers and must not authorize any other trains or transfers to enter the affected limits except as provided by Rule 567.3 or until the work authority has been cancelled.
- (d) If work authority is cancelled while the train or transfer is within the affected limits, the conductor or locomotive engineer must inform the RTC of their intended direction. The RTC must maintain signal blocking against opposing trains or transfers until the protected train or transfer has cleared the controlled block.
- (e) When the authority specifies: "Call RTC _____" the conductor or locomotive engineer must communicate with the RTC as instructed.
- (f) The authority granted and instructions must be in writing. The locomotive engineer must be aware of the track limits before moving.
- (g) Controlled signals within the limits other than the entry and exit signals of the authority that are indicating STOP may be considered as indicating "proceed at RESTRICTED speed".

566.1 SIGNAL INDICATION SUSPENDED WHILE SWITCHING

- (a) A crew may be authorized to manually operate specific dual control switches at a controlled location, as prescribed by Rule 104.2, paragraph (d). Such authority must be included with work authority, as prescribed by Rule 566 or 567. The indications of signals governing operation over such switches may be considered suspended while switches are in the "hand" position, but only while switching is being performed at the designated controlled location. Signal indication or Rule 564 must authorize the train or transfer into the controlled location, before being issued the Rule 566/566.1 authority.

Verbal permission may be given to manually operate specific dual control switches within the limits of Rules 566 or 567 authority that did not include Rule 566.1 authority for those switches.

- (b) When switching is to be performed over a spring switch, which is included in the limits of a work authority prescribed by Rule 566 or 567, the indication of the signal governing operation over such switch may be considered suspended, if the switch is properly lined.
- (c) When switching is to be performed at a controlled location that includes only a hand operated switch, which is included in the limits of a work authority prescribed by Rule 566 or 567, the indication of the signal governing operation through the controlled location may be considered suspended but only when switching is being performed through that switch.

567. JOINT WORK AUTHORITY

- (a) More than one train or transfer may be given joint work authority that permits operation in either direction within the specified limits. Each such train or transfer must be instructed: "Protecting against each other." The conductor and locomotive engineer of each train or transfer must have a thorough understanding in writing with respect to the intended operation of each train or transfer and the protection to be provided.
- (b) Before issuing joint authority, the RTC must;
 - (i) ensure that there are no trains or transfers in the affected limits, other than the trains or transfers which are to be authorized; and
 - (ii) block at Stop all devices controlling signals governing trains and transfers into the affected limits.
- (c) The RTC must maintain signal blocking against all trains or transfers and must not authorize any train or transfer, other than one which is thereby protected, to enter the affected limits until the work authority has been cancelled. Each train or transfer must be clear of the affected limits before the work authority is cancelled.

EXCEPTION: If the work authority remains to be cancelled to only one train or transfer, it may be cancelled while that train or transfer is within the affected limits. In such case, the conductor or locomotive engineer must inform the RTC of their intended direction. The RTC must maintain signal blocking against conflicting trains or transfers until the protected train or transfer has cleared the controlled block.
- (d) When the authority specifies: "Call RTC _____," the conductor or locomotive engineer of each train or transfer so instructed must communicate with the RTC as instructed.
- (e) The authority granted and instructions from the RTC must be in writing. The locomotive engineer of the train or transfer so authorized, must be made aware of the track limits before moving.

567.1 PROTECT AGAINST A FOREMAN

- (a) A train or transfer may be authorized to enter or move within the limits of a TOP when instructed to protect against the foreman within specified limits.

"Protect against foreman (name) between (location) and (location)."
- (b) The conductor and locomotive engineer must be made aware of the authority granted and have received instructions from the foreman before moving. The instructions must be repeated to, and acknowledged by the foreman before being acted upon.
- (c) The RTC must not authorize another train or transfer or issue another TOP to apply, within the protected limits granted under this rule until it has been fulfilled by the train or transfer having cleared the limits, or the authority has been cancelled.
- (d) In addition to the permission and instructions received from a foreman to enter and/or move within the limits, trains or transfers must also be authorized to enter the TOP limits under the provisions of Rule 105(a), Rule 564 or Rule 568, or to reverse within the TOP limits under the provisions of Rule 566.

567.2 OPTIONAL: ENTERING FOREMAN'S LIMITS

Trains or transfers may be authorized to enter or move within the limits of a TOP.

- (a) Each time a train or transfer is so authorized, the train or transfer must be restricted as follows:
"Protect against foreman (name) between (location) and (location)".
Such restriction must be provided to the train or transfer when it is within:
 - (i) two controlled blocks of the limits; or
 - (ii) 25 miles of the limits when there is no controlled block prior.The RTC must ensure that the authorized train or transfer is the only one that will encounter the signal indication to enter the limits.
- (b) No entry into TOP limits may be made until both the conductor and locomotive engineer are aware of the authority and limits granted and have received instructions from the foreman named in the authority. Such instructions must be repeated to and acknowledged by the foreman before being acted upon.

567.3 PROCEEDING THROUGH WORK LIMITS

Trains or transfers may be authorized to enter or move within work limits of other trains or transfers.

- (a) Each time a train or transfer is so authorized, the train or transfer must be restricted as follows:
"Protect against work (number) between (location) and (location)".
- (b) A train or transfer authorized as outlined in paragraph (a) must not enter or move within the working limits until a written understanding has been established with the conductor and locomotive engineer or each train or transfer. This understanding must include information with respect to the intended operation of each train or transfer and remain in place until the affected train or transfer has left the working limits.
- (c) Prior to entering the limits, the train or transfer must also be authorized by signal indication or under the provisions of rules 564 or 568.
- (d) When entry is to be provided by signal indication, the restriction may only be issued when the train or transfer is within:
 - (i) two controlled blocks of the limits; or
 - (ii) 25 miles of the limits when there is no controlled block priorThe RTC must ensure the authorized train or transfer is the only one which will encounter the signal governing entry into the limits.

568. SIGNAL OR PERMISSION TO ENTER MAIN TRACK

- (a) A train or transfer must not foul or enter a main track, nor re-enter one after having cleared it, except by signal indication or until permission has been received from the RTC.
- (b) When entry to the main track is to be made at a non-electrically locked hand operated switch, or at a switch where the seal on the electric switch lock is broken, such permission from the RTC must include the direction and route to be taken and must be in writing. The locomotive engineer must be made aware of the circumstances before moving.
Before issuing such permission the RTC must;
 - (i) ensure that there are no conflicting trains or transfers within, or authorized to enter, the controlled block affected; and
 - (ii) block at Stop all devices controlling signals governing trains or transfers into the affected controlled block.

- (c) The RTC must maintain signal blocking and not permit any opposing train or transfer to enter the controlled block until the protected train or transfer has cleared the controlled block. Signal blocking against following trains or transfers must not be removed nor may following trains or transfers be permitted to enter the controlled block until the conductor or locomotive engineer, of the train or transfer being protected, has reported that the train or transfer has entered the main track and is moving in the authorized direction.

EXCEPTION: Permission is not required to enter or re-enter the main track at a hand operated switch within the limits when authorized by Rule 566, 567 or 577.

569. CANCELLING AUTHORITIES

- (a) Authority or permission granted by Rules 564, 567.3 or 568 may be cancelled provided the train or transfer has not entered the controlled block affected.
- (b) When authority granted by Rules 564, 566, 567, 567.1, 567.2, 567.3 or 577 or the permission in writing granted by Rule 568 is cancelled, the cancellation does not take effect until it has been correctly repeated and acknowledged by the conductor and locomotive engineer of the train or transfer affected. These employees must acknowledge the cancellation by repeating the authority number, "cancelled" and initials of the RTC to the RTC.

570. ENTERING BETWEEN SIGNALS

- (a) A train or transfer that has entered a block between signals at a hand operated switch, equipped with an electric switch lock, must approach the next signal prepared to stop, unless or until the track is seen to be clear to the next signal and such signal displays a more favourable indication than Stop or Stop and Proceed.
- (b) When entry to a block is made at a switch not equipped with an electric switch lock, or one where the seal on the electric switch lock is broken, a train or transfer must operate at RESTRICTED speed to the next signal, unless or until the track is seen to be clear to the next signal, and the indication of such signal permits operation at other than RESTRICTED speed.
- (c) A train or transfer that has entered a block, where it has been necessary to activate the emergency release of an electric switch lock, must move at RESTRICTED speed to the next signal.

571. RESTORING SIGNALS TO STOP

- (a) Signals must not be restored to indicate stop when the train or transfer for which signals were first cleared is less than three blocks distant from the first of such signals, unless the locomotive engineer has acknowledged that they are stopped or able to stop their train or transfer without passing the controlled signal to be restored.
- (b) In case of emergency, a signal may be restored to stop at any time.

573. REVERSING DIRECTION

- (a) A train or transfer, having passed beyond the limits of a block, must not back into that block until the RTC has been informed, and such train or transfer is authorized by;
- (i) the indication of a block signal, other than a Restricting Signal equipped with a plate displaying the letter "R", or a Stop and Proceed Signal;
 - (ii) Rule 564 or 567.3; or
 - (iii) Rule 566, 567 or 577.

NOTE: (iii) does not dispense with the requirements of Rule 564 at a Stop Signal except in the application of Rule 566(g) or 577(f).

- (b) When a train or transfer has entered a controlled location on signal indication, and stops with its trailing end within such controlled location, it may only move in the opposite direction within the controlled location with permission from the RTC. Unless relieved by the RTC, the movement must comply with Rule 104.2(b). RTC permission does not authorize occupancy outside of the controlled location.
- (c) Provided it will not re-enter a block it has cleared, a train or transfer may reverse direction within a block without Rule 566, 567 or 577 protection as follows:
 - (i) to reverse a distance of 300 feet or less, a crew member must take up a position to see the section of track to be used is clear and will remain clear of equipment or a track unit; or
 - (ii) to reverse a distance greater than 300 feet, a flagman must take up a position beyond the farthest point to which the train or transfer may extend. Stop signals must be given by the flagman from a point where they can be plainly seen from an approaching train or transfer from not less than 300 yards.

576. SWITCHING AT A CONTROLLED LOCATION

- (a) **Signal Indication** - The preferred method of switching at a controlled location is with the use of the signal system by having the RTC signal the train or transfer over the controlled location with directional signals. If unable to clear the controlled location when switching is completed, the RTC will authorize departure by issuing a Rule 566 or 577 to the train or transfer. If the first move into the block was authorized by Rule 564, operation to the next signal must be made at RESTRICTED speed.
Rule 566 or 577 would not be required when the RTC verbally authorizes the train or transfer to pull ahead to the next signal where there are no dual control switches to be encountered.
- (b) **Switching Signals** - A member of the crew will request the switching signal so that multiple moves may be made through the controlled location on a specific route. When switching is completed, the RTC must be advised to ensure the signal will be cancelled. Before doing so, the member of the crew requesting the cancellation must advise all other crew members and receive their assurance that they are and will remain clear of the switching signal limits. If unable to clear the controlled location, the RTC will verbally authorize departure. The RTC will then cancel the switching signal. The train or transfer may then proceed to the next signal at RESTRICTED speed.
To avoid having to proceed at RESTRICTED speed, trains or transfers should attempt to back clear of the switching signal on the final move and leave on a more permissive signal indication.
- (c) **Rule 566.1 and 577.1 Signals Suspended** - The train or transfer must be authorized to enter the block before Rule 566/566.1 or 577/577.1 authority is issued by the RTC. If the train or transfer is unable to be clear of the limits when switching is completed, they must advise the RTC before leaving the location. If Rule 564 authorized the first move into the block, the train or transfer must operate to the next signal at RESTRICTED speed.
- (d) **Taking Head-Room** - Provided that the trailing end remains within non-main track territory, a train or transfer may accept a signal to enter a controlled location, where the intent of the move is to subsequently reverse direction so as to be completely in the clear in the non-main track territory. The RTC must be informed of the intended head-room move when the signal is requested. The crew may request one or more head-room moves but each time the signal provides a permissive indication, it is for one head-room move only.

577. OPTIONAL to 566/567 with system: WORK AUTHORITY

- (a) A train or transfer may be given work authority in writing which permits moving in either direction within specified limits. Before issuing such authority, the RTC must:
 - (i) ensure that there are no other trains or transfers within, or authorized to enter, the required limits, and;
 - (ii) block at Stop all devices controlling signals governing other trains or transfers into such limits.
- (b) Other trains or transfers may be authorized to work within the limits of one or more trains or transfers authorized to work provided such trains or transfers are restricted on their authority as follows: "Protect against work (number) between (location) and (location)".
- (c) When entry is to be provided by signal indication, the signal may only be requested when the train or transfer is within:
 - (i) two controlled blocks of the limits; or
 - (ii) 25 miles of the limits when there is no controlled block prior

The RTC must ensure the authorized train or transfer is the only one which will encounter the signal governing entry into the limits.

- (d) Trains or transfers so authorized as outlined in paragraph (b) must not enter or move within the working limits until a written understanding has been established with the conductor and locomotive engineer of each train or transfer. This understanding must include information with respect to the intended operation of each train or transfer and remain in place until the affected train(s) or transfer(s) has left the working limits.
- (e) The RTC must maintain signal blocking against trains or transfers and must not authorize any train or transfer, other than one authorized by Rule 567.3 or as outlined in paragraph (b), to enter the affected limits until the work authority has been cancelled. Each train or transfer must be clear of the affected limits before its work authority is cancelled.

EXCEPTION: If the work authority remains to be cancelled to only one train or transfer, it may be cancelled while that train or transfer is within the affected limits. In such case, the conductor or locomotive engineer must inform the RTC of the intended direction of operation. The RTC must maintain signal protection against opposing trains or transfers until the protected train or transfer has cleared the controlled block.

The locomotive engineer of a train or transfer so authorized must be made aware of the track limits before moving.

- (f) Controlled signals within the limits other than the entry and exit signals of the authority that are indicating STOP may be considered as indicating "proceed at RESTRICTED speed". Not applicable at automatic interlockings or interlockings controlled by a foreign railway. Rule 104.2(b) is not applicable when advised by the RTC that dual control switch(es) are lined for the route to be used.

577.1 (OPTIONAL to 566.1 with system) SIGNAL INDICATION SUSPENDED WHILE SWITCHING

- (a) A train or transfer may be authorized to manually operate specific dual control switches at a controlled location as prescribed by Rule 104.2, paragraph (d). Such authority must be included with work authority, as prescribed by Rule 577. The indications of signals governing operation over such switches may be considered suspended while switches are in the "hand" position, but only while switching is being performed at the designated controlled locations. Note: Verbal permission may be given to manually operate specific dual control switches within the limits of Rule 577 authority that did not include Rule 577.1 authority for those switches.
- (b) When switching is to be performed over a spring switch, which is included in the limits of a work authority prescribed by Rule 577, the indication of the signal governing operation over such switch may be considered suspended if the switch is properly lined.

578. RADIO BROADCAST REQUIREMENTS

- (a) Within single track, a member of the crew on all trains or transfers must initiate a radio broadcast to the airwaves on the designated standby channel stating the name of the signal displayed on the advance signal to the next controlled location, controlled point or interlocking.
- (b) A member of the crew located on other than the engine must confirm that the radio broadcast has been made in accordance with (a). If unable to contact the engine crew to ascertain this information, immediate action must be taken to stop the train or transfer before it will reach the next controlled location, controlled point or interlocking.

INTERLOCKING RULES

601. APPLICATION

A movement will be governed by interlocking rules within interlocking limits. Interlocking signal indications govern the use of the routes within interlocking limits. Instructions may be issued by a signalman when necessary.

602. PROPER SIGNAL INDICATIONS REQUIRED

- (a) Except in case of emergency, radio or hand signals must not be used when the proper indication can be displayed by the interlocking signals.
- (b) A movement stopped by the signalman, other than by means of signal indication, while approaching, or within an interlocking, must not move in either direction until the proper signal or instructions have been received from the signalman.
- (c) When a movement stops with its trailing end within interlocking limits, it must not reverse direction without the proper interlocking signal indication, or permission from the signalman.

604. ESTABLISHING AND CHANGING ROUTES

- (a) Signals for an approaching movement must not be restored to indicate stop unless the locomotive engineer has acknowledged that they are stopped or able to stop their movement without passing the interlocking signal to be restored.
- (b) In case of emergency, a signal may be restored to Stop at any time.
- (c) No part of a route may be changed, nor signals cleared for a movement on a conflicting route, unless the locomotive engineer of the movement for which the route was cleared has acknowledged that they are able to comply with the new routing.

605. DELAYED IN TIMING CIRCUIT

A movement approaching an automatic interlocking, equipped with a timing circuit, must approach the interlocking signal prepared to stop if occupying the timing circuit in excess of the time specified in special instructions.

At automatic interlockings not equipped with a timing circuit, a movement occupying the track between the advance signal and the interlocking signal in excess of 5 minutes must approach the interlocking signal prepared to stop.

606. APPROACHING INTERLOCKING LIMITS

At a location not protected by an advance signal, a movement must approach interlocking limits prepared to comply with a signal indicating Stop.

607. RULE APPLICABLE AT A STOP SIGNAL

When an interlocking signal indicates Stop and no conflicting movement is evident, the following will apply:

TYPE OF INTERLOCKING (as indicated in special instructions)	APPLICABLE RULE
Manual	608
Locally-Controlled	609
Remotely-Controlled	610
Automatic	611

608. MANUAL INTERLOCKING

Movements operating through the limits of a manual interlocking will be governed by special instructions.

609. LOCALLY-CONTROLLED INTERLOCKING SIGNAL INDICATING STOP

- (a) A movement must have authority to pass a locally-controlled interlocking signal indicating Stop. When no conflicting movement is evident:
- (i) the signalman may authorize such movement to pass the signal, but before doing so, the signalman must provide protection against all conflicting movements; and
 - (ii) the movement so authorized need not stop at the signal but must positively identify the signal by number. It must move at RESTRICTED speed to the next signal or Block End sign and will be governed by Rule 104.1 at spring switches, Rule 104.2 at dual control switches and Rule 104.3 at power-operated switches.
- (b) Before moving, the locomotive engineer must be informed of the situation.
- (c) When the signalman is off duty at a locally-controlled interlocking, a movement stopped by an interlocking signal indicating Stop will be governed by special instructions.

610. REMOTELY-CONTROLLED INTERLOCKING SIGNAL INDICATING STOP

- (a) A movement must have authority to pass a remotely-controlled interlocking signal indicating Stop. The signalman may authorize the movement to pass the signal but before doing so must ensure that there is no conflicting movement in the route to be used, and that all devices controlling signals governing conflicting movements are blocked at Stop. The authorization must specify the route to be used, and must be in writing.
- (b) The movement so authorized need not stop at the signal but must positively identify the signal by number. It must move at RESTRICTED speed to the next signal or Block End sign and will be governed by Rule 104.1 at spring switches, Rule 104.2 at dual control switches and Rule 104.3 at power-operated switches. If there is a railway crossing at grade equipped with a box marked "switches" within the interlocking, the provisions of Rule 611 apply.
- (c) The locomotive engineer must be made aware of the route to be used before moving.

611. AUTOMATIC INTERLOCKING SIGNAL INDICATING STOP

When a movement is stopped by an automatic interlocking signal indicating Stop:

- paragraphs (a), (b) and (c) apply when no other movement or track work is evident; or
 - paragraph (d) applies when track work is evident.
- (a) When no other movement or track work is evident;
- (i) a crew member, after opening the box marked "switches", will observe panel lights, where provided. If those of the conflicting route(s) are lighted and no conflicting movement is evident, the crew member will open the knife switch and may then allow the movement to proceed;

- (ii) (MULTI-TRACK) in the box marked “switches” where lights are provided to indicate the approach of a movement, if those of the conflicting route and those of the same railway on the adjacent track are lighted and no other movement is seen approaching, the crew member will open the knife switch and may then allow the movement to proceed;
- (iii) where lights are not provided, or where those of the conflicting route(s) are not lighted, the crew member, after opening the knife switch, must wait five minutes, unless a greater period is specified in special instructions and posted in the box marked “switches”, before permitting the movement to proceed;
(MULTI-TRACK) - When the lights of the same railway on the adjacent track are not lighted and no other movement is seen approaching, the crew member will contact the RTC before opening the knife switch, to ascertain whether or not a movement is closely approaching on that adjacent track to prevent displaying STOP indications to such movement.
- (iv) after complying with (i), (ii) or (iii) the movement must then operate at RESTRICTED speed to the next signal or Block End sign; and
- (v) after the movement has occupied the crossing, the switch must be closed and the box marked “switches” locked.
- (b) Where a pushbutton is provided, to enable a reverse move to be made over the crossing, the crew member will open the box, depress the pushbutton and be governed by signal indication. If the signal fails to clear, the instructions contained in paragraph (a) must be complied with.
- (c) A movement required to switch within or into automatic interlocking limits must, after complying with (a)(iii) leave the knife switch open until switching is completed. When the knife switch is in the open position, signals governing the switching may be considered suspended but only while switching.
- (d) When track work is evident; i.e. when encountering a “840.3 Protection” visible indicator or a special lock on the box marked “switches”; after stopping at the signal, the movement must not proceed beyond the signal until instructions have been received from the foreman. When so authorized by the foreman to proceed, the movement must move at RESTRICTED speed to the next signal or Block End sign.

612. STOPPED FOUL OF SIGNAL

When a movement, which has accepted an indication of an interlocking signal permitting it to proceed, stops before the leading locomotive or car has completely passed such signal, it may then proceed only after receiving permission from the signalman or under the provisions of Rule 611.

614. LEAVING INTERLOCKING IN ABS OR CTC

When an interlocking is located in ABS or CTC, the indication of the last interlocking signal, in the direction of travel, also governs the movement to the next signal or Block End sign. If necessary to pass such signal in accordance with Rule 609, 610 or 611, unless otherwise specified in special instructions, Rule 509 or 564 also applies beyond the interlocking limits.

615. SINGLE UNIT OF EQUIPMENT RESTRICTED

A single unit of equipment must not be left standing on the movable portion of an interlocked drawbridge or within the interlocking limits of a railway crossing at grade.

616. DAMAGE TO INTERLOCKING

When it is known or suspected that:

- (i) a derailment has occurred; or
- (ii) track, appliances or signals are damaged or malfunctioning;

the signalman must block all controls for signals governing movements over the affected routes at Stop. No move may then be permitted until the signalman has established that they may pass safely.

617. DISCONNECTING TRACK PARTS OR LOCKING DEVICES

Before any movement is permitted to pass over any movable track part or locking device which has been disconnected, all movable track parts affected must be spiked or secured in the required position and their controls blocked to prevent them from being operated.

618. PROTECTING AGAINST A FOREMAN

- (a) A movement may be authorized to enter or move within the limits of a TOP when instructed to protect against the foreman within specified limits.
“Protect against foreman (name) between (location) and (location).”
- (b) The conductor and locomotive engineer must be made aware of the authority granted and have received instructions from the foreman before moving. The instructions must be repeated to, and acknowledged by, the foreman before being acted upon.
- (c) The signalman must maintain signal blocking against all other movements and must not authorize any other movement, or issue another TOP to apply, within the protected limits until the authority granted under this rule has been cancelled. Other members of the crew must immediately be advised of the cancellation and all copies of the cancelled authority must be destroyed.

618.1 OPTIONAL: TO 618 WITH SYSTEM. PROTECTING AGAINST A FOREMAN

Movements may be authorized to enter or move within the limits of a TOP.

- (a) Each time a movement is so authorized, the movement must be restricted as follows:
“Protect against foreman (name) between (location) and (location).”
Such restriction must be provided when the movement is within:
 - (i) two controlled blocks of the limits; or
 - (ii) 25 miles of the limits when there is no controlled block prior.

The RTC must ensure that the authorized movement is the only one that will encounter the signal indication to enter the limits.

- (b) No entry into TOP limits may be made until both the conductor and locomotive engineer are aware of the authority and limits granted and have received instructions from the foreman named in the authority. Such instructions must be repeated to, and acknowledged by, the foreman before being acted upon.
- (c) In addition to the permission and instructions received from a foreman to enter and/or move within the limits, trains or transfers must also be authorized to enter the TOP limits by signal indication or the provisions of Rules 609, 610 or to reverse within the TOP limits under the permission of the signalman.

619. TRANSFER BY SIGNALMEN

- (a) Where an ECM is used or where a computer assisted system generates a list as outlined in (b), the relieving signalman must sign into the system in the presence of the on-duty signalman, and receive verbal and/or written transfer of other necessary instructions and information.
- (b) Except as prescribed in paragraph (a), before being relieved, the signalman must make a transfer in a book or on a form provided for that purpose, of TOP and other authorities in effect. The transfer must include the time and other necessary information and must be signed by both the relieved and the relieving signalman.

620. NON-INTERLOCKED DRAWBRIDGES AND RAILWAY CROSSINGS AT GRADE

A movement must stop before any part of it passes the governing stop sign at a non-interlocked drawbridge or at a non-interlocked railway crossing at grade. If no conflicting movement is evident and the route is properly lined, the movement may resume. Special instructions will govern when there is an attendant in charge.

PROTECTION OF TRACK UNITS AND TRACK WORK

NOTICE

Wherever the term RTC appears herein, it also applies to signalman.

801. OCS CLEARANCE IN LIEU OF TOP

A clearance may be issued in lieu of TOP and the provisions of Rules 80(b), 82, 85, 302, 308.1, 311, 803(c) and 849 apply.

802. SPEED

Unless otherwise authorized, track units must always be operated at track unit speed.

803. TRACK UNIT AND TRACK WORK AUTHORIZATION

Refer to Rules 805 to 813 for rules applicable within interlocking limits and non-interlocked railway crossings at grade and non-interlocked drawbridges.

(a) Track occupancy by a track unit is permitted as follows:

Territory	Rule or Authority
OCS	Rule 842, TOP or Clearance
CTC	Rule 842 or TOP
Signalled Track	Rule 842 or TOP
Cautionary Limits	Rule 94
NMT	Rule 841
	Rule 105(c) or where it is not applicable, it must be known that there is no conflicting movement(s)
	TOP when SCT is applicable or specified by special instructions
	Other forms of protection when specified by special instructions
	On tracks where kicking is permitted per Rule 113.5(a), track must be protected by Rule 841(c)(i) or (iii).

(b) Track work is permitted as follows:

Territory	Rule or Authority
OCS	Rules 842, TOP or Clearance
CTC	Rules 842 or TOP
Signalled Track	Rules 842 or TOP
Cautionary Limits	Rules 841, Rule 842 or TOP
NMT	Rule 841
	TOP when SCT is applicable or specified by special instructions
	Other forms of protection when specified by special instructions
	On tracks where kicking is permitted per Rule 113.5(a), track must be protected by Rule 841(c)(i) or (iii).

(c) When no longer required, the foreman must promptly cancel or remove the protection and advise any person responsible for the track.

- (d) Prior to the removal, cancellation or expiration of protection, or providing instructions to a movement; the foreman must ensure, unless otherwise protected:
 - (i) the track is safe for movements at normal speed; and
 - (ii) employees or track units for which the foreman is responsible are clear of the track.

TRACK WORK AND TRACK UNITS AT RAILWAY CROSSINGS AT GRADE, DRAWBRIDGES, INTERLOCKINGS AND NON-INTERLOCKINGS

805. MANUAL AND OTHER INTERLOCKINGS NOT SPECIFIED IN THESE RULES – PROTECTION OF TRACK UNITS AND TRACK WORK

See special instructions.

806. AUTOMATIC INTERLOCKINGS – RAILWAY CROSSINGS AT GRADE

(a) Track Work:

Rule 840.3 applicable.

(b) Track Units:

If no conflicting movement is evident, the track unit may proceed but must stop clear of the conflicting route, where the foreman must then unlock the box marked “switches”, and open the switch at the interlocking. The switch must not be closed until the track unit has cleared the conflicting route(s).

EXCEPTION: A track unit that affects the signal system must stop before passing the interlocking signal.

Before permitting the track unit to proceed the foreman must wait five minutes or such greater time as may be posted in the box or indicated in special instructions. The required waiting period need not be observed when occupancy indication lights on the conflicting route(s) are illuminated.

MULTI-TRACK - When the lights of the same railway on the adjacent track are not lighted and no movement is seen approaching, the foreman will contact the RTC before opening the switch, to ascertain whether or not a movement is closely approaching on that adjacent track to prevent displaying STOP indications to such movement.

807. LOCALLY-CONTROLLED INTERLOCKING – RAILWAY CROSSING AT GRADE

(a) Track Work:

Separate TOP for the interlocking or other written instructions issued by the signalman.

(b) Track Units:

Operation beyond the interlocking signal must not be made until verbal authority, hand signal or separate TOP for the interlocking has been received from the signalman.

If the control office is closed or all attempts to communicate with the signalman fail, the foreman must;

- (i) if no conflicting movement is evident, unlock the box marked “switches” located at the interlocking and, after opening the switch must wait five minutes or such greater time as may be specified in the box before permitting the track unit to proceed;
- (ii) not close the switch until the track unit clears the interlocking limits; and
- (iii) where switches are not provided, follow the instructions posted in the box or contained in special instructions.

808. LOCALLY-CONTROLLED INTERLOCKING – DRAWBRIDGES

(a) Track Work:

Separate TOP for the interlocking or other written instructions issued by the signalman.

(b) Track Units:

Operation beyond the interlocking signal must not be made until verbal authority, hand signal or separate TOP for the interlocking has been received from the signalman.

If there is no signalman on duty, the track unit may proceed after the foreman has ascertained that the route is properly lined.

809. REMOTELY-CONTROLLED INTERLOCKING – RAILWAY CROSSING AT GRADE

(a) Track Work:

Separate TOP for interlocking unless in possession of other protection encompassing all routes which provide access to the working limits.

(b) Track Units:

Operation beyond the interlocking signal must not be made until a separate TOP for the interlocking has been received from the signalman.

Unless otherwise specified in special instructions, the signalman may provide verbal authority for the foreman to occupy the interlocking limits.

810. REMOTELY-CONTROLLED INTERLOCKING – DRAWBRIDGES

(a) Track Work:

Separate TOP for interlocking.

(b) Track Units:

Operation beyond the interlocking signal must not be made until a separate TOP for the interlocking has been received from the signalman.

811. SIGNALMAN REQUIREMENTS – CONTROLLED INTERLOCKINGS

Before giving verbal authority or a hand signal to proceed, a signalman must;

- (a) ensure there are no conflicting movements within or authorized to enter the authorized route;
- (b) block at STOP all devices controlling signals governing movements into the authorized route; and
- (c) maintain the blocking until the foreman has reported clear of the authorized route.

812. NON-INTERLOCKED RAILWAY CROSSINGS AT GRADE

(a) Track Work:

Rule 841 applicable.

(b) Track Units:

Operation beyond the governing stop sign must not be made until it is ascertained that no conflicting movement is evident.

Special instructions will govern, when there is an attendant in charge.

813. NON-INTERLOCKED DRAWBRIDGES

(a) Track Work:

Rule 841 applicable.

(b) Track Units:

Operation beyond the governing stop sign must not be made until it has been ascertained that the route is properly lined.

Special instructions will govern, when there is an attendant in charge.

TRACK UNITS OPERATING OVER POWER-OPERATED AND DUAL CONTROL SWITCHES

814. POWER-OPERATED SWITCHES

When a track unit(s) is required to move over a power-operated switch;

- (a) the switch must be lined by the RTC, except where the RTC gives permission to the foreman to have it operated by a qualified employee; and
- (b) when a power-operated switch is operated by a qualified employee, and after the track unit has cleared the switch points, the foreman must immediately advise the RTC.

815. DUAL CONTROL SWITCHES

When a track unit(s) is required to move over a dual control switch;

- (a) the switch must be lined by the RTC, except where the RTC gives permission to the foreman to operate such switch in the “hand” position; and
- (b) when a dual control switch is operated by the foreman in the “hand” position, and after the track unit has cleared the switch points, the foreman must ensure that the selector lever has been restored to the “power” position and locked and immediately advise the RTC.

816. FOREMAN REQUIREMENTS - IDENTIFYING ARRIVAL AND/OR DEPARTURE OF MOVEMENTS

When a foreman has been authorized to perform track work behind or has authorized a movement(s) to pass through working limits, the foreman or sub-foreman must not enter the track at a location within the limits until it has been positively ascertained that the movement(s) have arrived and/or left that location. Such information must be received from the RTC or a crew member or by the foreman or a sub-foreman identifying that a movement has arrived by visually identifying the designated engine and marker. Movements operating without a marker must be identified by the foreman or a sub-foreman by direct communication with a member of the crew of such or by the foreman through the RTC.

OPTIONAL – ONLY REQUIRED FOR THOSE USING RULES 862 and 863

This requirement is also applicable to an employee providing arrival and departure information to the RTC from a field location.

840.3 PROTECTION OF TRACK WORK AT AUTOMATIC INTERLOCKINGS RAILWAY CROSSINGS AT GRADE

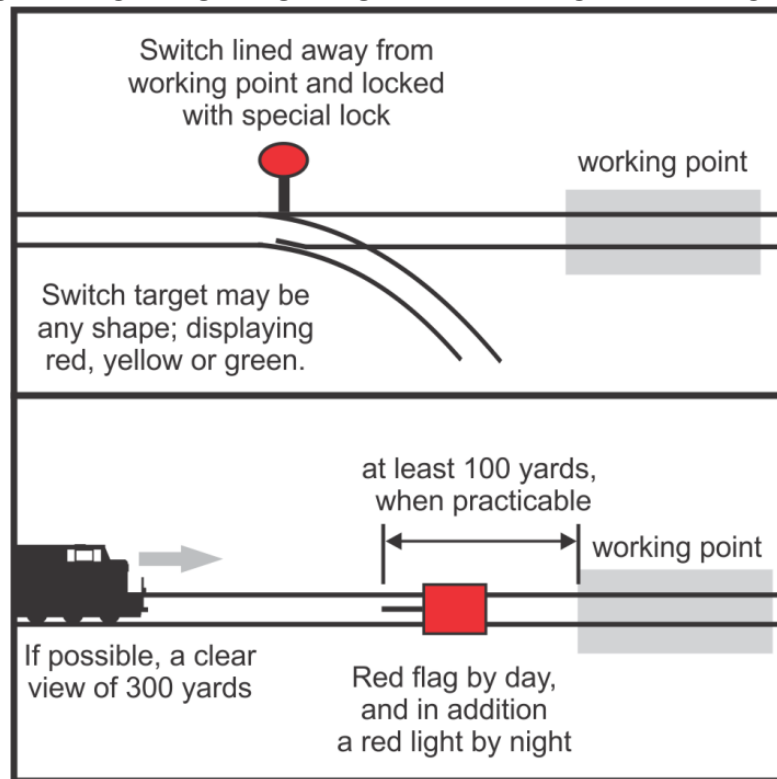
Foreman must also refer to Rule 611(d).

When the foreman is in possession of other protection encompassing all routes within the interlocking limits, protection as per Rule 840.3 is not required.

Track work may be performed within the limits of an automatic interlocked railway crossing at grade after protection has been provided as follows:

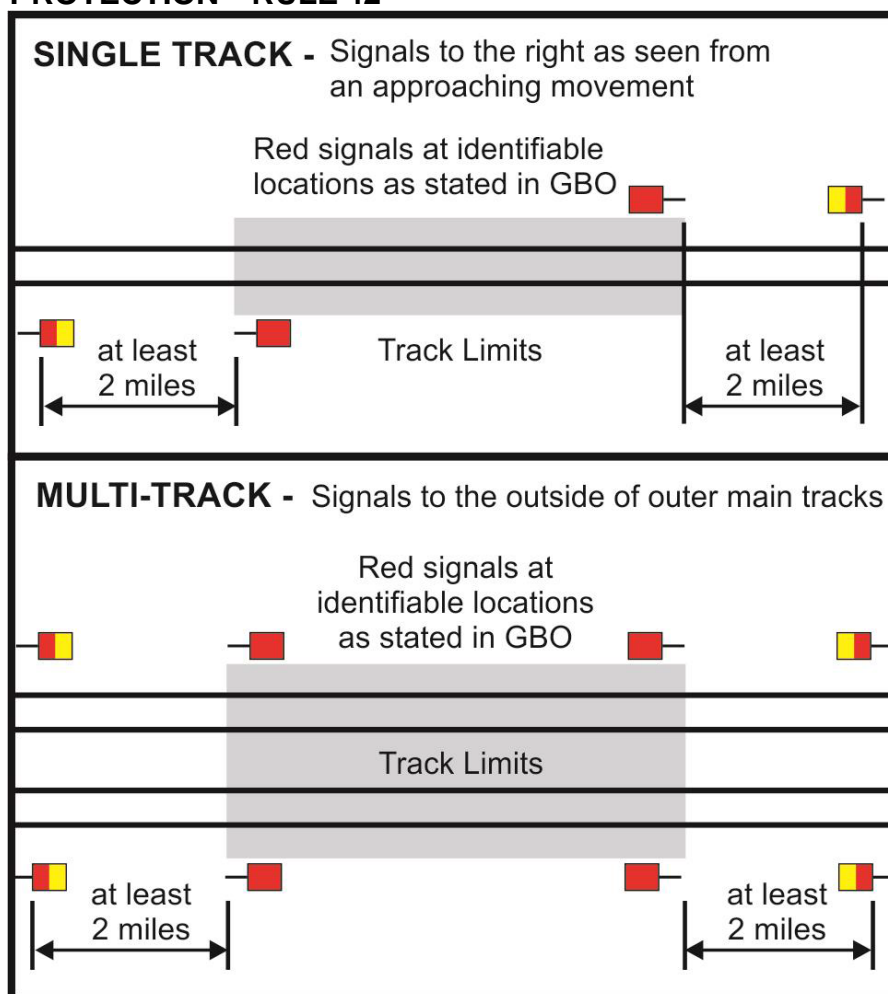
- (a) Permission must be obtained from the RTC of both railways (where applicable).
- (b) After permission has been obtained and before any track work is started, the foreman must open the box marked “switches”, open the knife switch and must wait five minutes or such greater time as may be posted in the box. The switch must be left open until track work is completed.
- (c) In addition, a visible indicator marked “840.3 Protection” or special lock must be secured to the box marked “switches” to indicate that track work is ongoing.
- (d) After track work is completed the RTC of both railways (where applicable) must be notified.

841. PROTECTION OF TRACK WORK ON NON-MAIN TRACK AND IN CAUTIONARY LIMITS



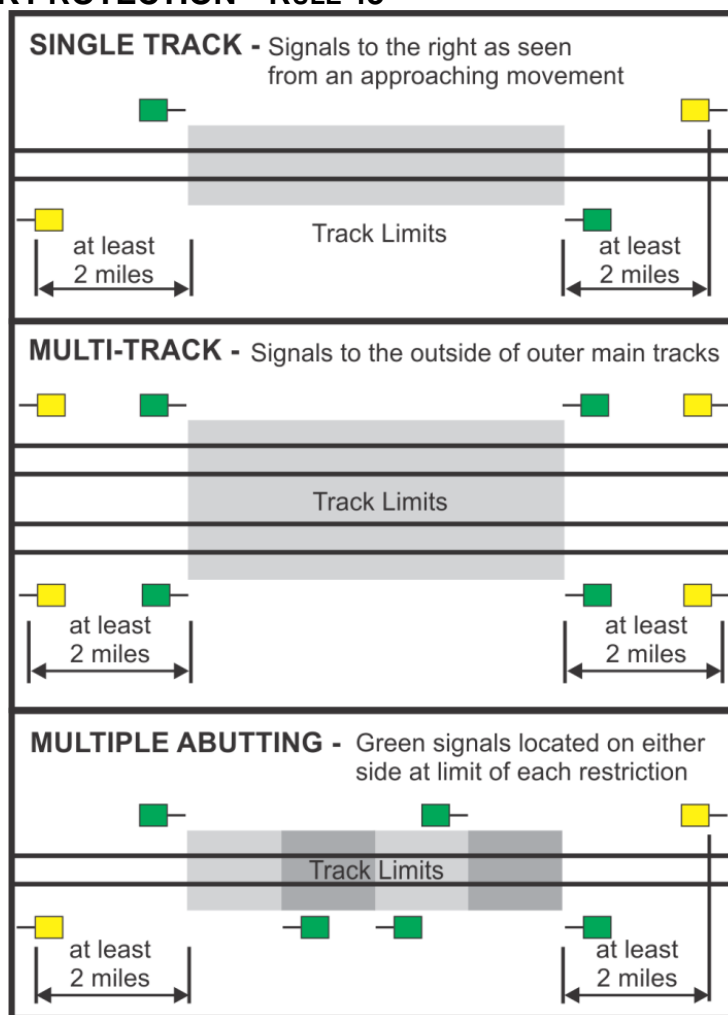
- (a) Before applying protection the employee responsible, if any, for the track must be advised.
- (b) When working limits are on a track where the kicking of equipment is permitted per Rule 113.5(a), protection must be provided by (c)(i) or (iii).
- (c) The foreman must provide protection to prevent access to the working limits using one or more of the following methods:
 - (i) lock switch(es) with a special lock, in a position to prevent a movement from entering the working limits;
 - (ii) place a red flag by day, and in addition, a red light by night, or when day signals cannot be plainly seen, between the rails to prevent a movement from entering the working limits. Such signal(s) must be placed at least 100 yards from the working point where practicable, where there will be a clear view of the signal(s) from an approaching movement of at least 300 yards. If there is equipment on the track which will prevent a clear view of 300 yards, the red signals must be placed to include such equipment; or
 - (iii) a red signal displayed per (ii) and a derail locked in the derailing position with a special lock.

842. PLANNED PROTECTION – RULE 42



- (a) When protection is required, the request must be in writing and on the prescribed form. When protection has been provided, the track and time limits must be confirmed in writing prior to the foreman named in the GBO arranging for the display of the prescribed flags as follows;
 - (i) place a red flag at each identifiable location stated in the GBO to the right of the track as seen from an approaching movement; and
 - (ii) place a yellow over red flag at least two miles outside the track limits defined by the red flags, to the right of the track as seen from an approaching movement.
 - (iii) Track work must not be undertaken until the prescribed signals are in place in all directions.
 - (iv) flags must not be in place more than 30 minutes prior to or after the times stated in the GBO unless provided for in the GBO.
 - (v) Track limits must not be overlapped.
- (b) When a specific track is to be used, instructions from the foreman must specify the track upon which the instructions apply.
 In CTC, when protection is in effect on more than one track or when signalled turnouts are within the limits there must be a clear understanding in writing between the foreman and the RTC as to what route(s) movements are to use. The foreman's instructions to the movement must be identical to the routing arrangement with the RTC. Should the foreman require operation on a specific track when the arrangement with the RTC was for more than one route, the foreman must make a new arrangement with the RTC before authorizing the movement.
- (c) Track limits shall be kept as short as practicable and be expressed in whole miles or by other identifiable locations.
- (d) The GBO must indicate the location of flags that cannot be placed at the distance prescribed.

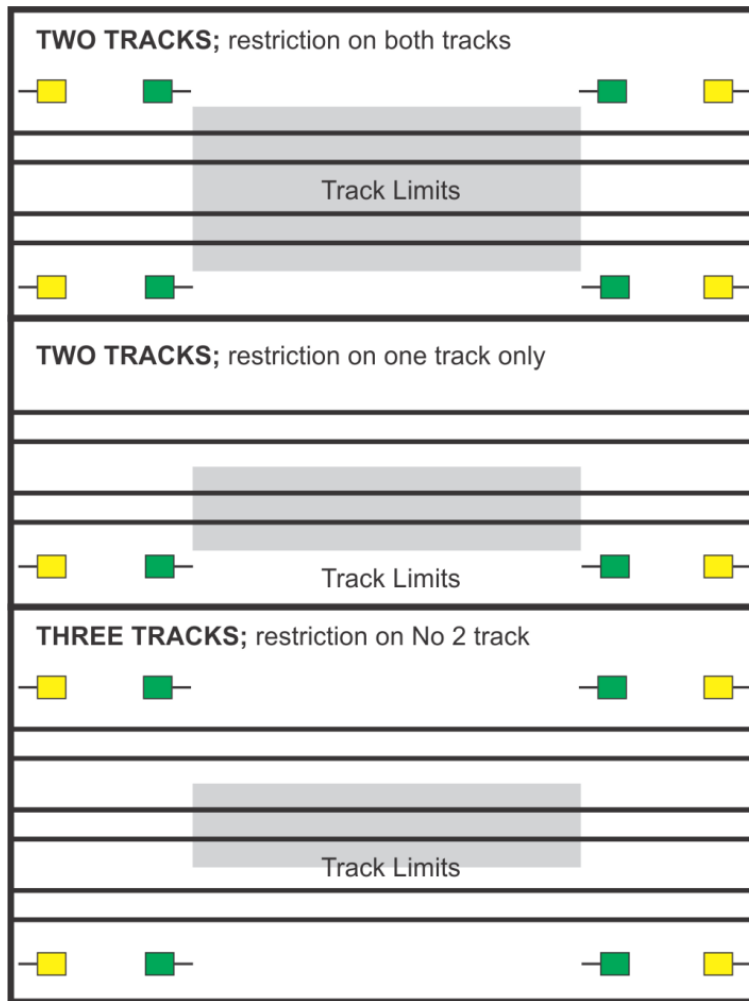
843. SLOW TRACK PROTECTION – RULE 43



- (a) When slow track protection is required the request must be in writing and when practicable on the prescribed form, and after GBO protection has been provided, the speed restriction(s) and limits must be confirmed to the foreman in writing who will arrange to place a:
- yellow flag to the right of the track as seen from an approaching movement at least two miles in each direction from the outermost limits indicated in the GBO, and
 - green flag to the right of the track as seen from an approaching movement in each direction, immediately beyond the defect.
- Exception: When there are abutting limits contained within a single GBO, a single green flag will be displayed to either side of the track to identify each restriction within the limits.
- (b) The GBO must indicate the location of flags that cannot be placed at the distance prescribed.
- (c) When the placement of flags as prescribed is delayed, the RTC must be advised and the following must be added to the Form V: "Signals may not be in place." The flags must be placed as soon as possible and the GBO changed accordingly.
- (d) When a restriction is located at a single mile point, one green signal will be displayed to identify the restriction and may be displayed to either side of the track.
- (e) When a rail break has been detected by an engineering employee and it is safe to operate over the break at a speed less than posted speed, the RTC will provide GBO protection to affected movements stating the authorized speed over the break and how such location is marked in the field, by either a Rail Break Sign or foreman, at the break. Flags required will not be in place.
- (f) The regular placement of flags must be utilized after 24 hours if the defect is continuing.

845. SIGNAL PLACEMENT MULTI-TRACK

Except on a subdivision designated in special instructions, signals required by Rules 842 and 843, must be placed to the outside of the outermost track(s) and not between the main tracks.



846. MOUNTING OF SIGNALS

- (a) Signals displayed for protection of track work and track conditions must provide an unobstructed view of them as seen by the crew of an approaching movement. They will be of the prescribed colour, size and shape.
- (b) When a day signal cannot be plainly seen, each flag must be reflectorized or equipped with a reflectorized lens, target or disc, or a reflectorized sign may be used instead. In the application of Rule 841, the required light must be displayed.
- (c) Red, yellow, and yellow over red flags may display those colours only in the direction of an affected approaching movement. Green flags must display that colour in both directions.

TRACK OCCUPANCY PERMITS

849. BEFORE ISSUING TOP AUTHORITY

Before issuing TOP authority, the RTC must;

- (a) ensure there is no conflicting movement within, or authorized to enter, the TOP limits to be granted unless such movement has been restricted in accordance with Rule 311, 567.1, 567.2, 618 or 618.1; and
- (b) in CTC and controlled interlockings, block at Stop all devices controlling signals governing the entry of movements into the limits to be granted. Signal blocking applied to protect a TOP must be maintained until the TOP is cancelled to the foreman.

850. SAME OR OVERLAPPING TOP LIMITS

The RTC must not authorize a movement to enter overlapping TOP limits.

851. TOP AUTHORITY WITHIN CAUTIONARY LIMITS

- (a) A TOP must not be issued to apply within cautionary limits where there are movements operated that cannot be controlled by the RTC.
- (b) The RTC must not authorize a movement to the cautionary limit sign while a TOP is in effect within such limits.

852. TOP ENCOMPASSING CONTROLLED LOCATIONS

When authorized by a TOP to occupy a track within a controlled location, the authority includes any track within the controlled location that connects to that track but only to a point on the connecting track where occupancy would require separate TOP authority.

853. REMAINS IN EFFECT

A TOP once in effect continues so until superseded or cancelled.

854. ONE TRACK UNIT – FOREMAN REQUIREMENTS

Before acting under the authority of a TOP, a foreman in charge of a single track unit must;

- (a) read the TOP aloud to the employees accompanying the track unit; and
- (b) require those employees who hold a valid certificate of rules qualification to read and initial the TOP.

855. MULTIPLE TRACK UNITS AND/OR TRACK WORK – FOREMAN REQUIREMENTS

Before acting under the authority of a TOP, a foreman in charge of the protection of track work or in charge of more than one track unit must;

- (a) read the TOP aloud to at least one other employee involved in the work who holds a valid certificate of rules; and
- (b) when conditions permit, require those to whom the TOP is read aloud, to read and initial the TOP.

Special instructions will indicate additional procedures for protection of sub-foreman.

856. COMMUNICATION BETWEEN EMPLOYEES AND FOREMEN

An employee who has been made aware of the contents of the TOP must remind the foreman of the contents in sufficient time to ensure compliance.

857. MULTIPLE TOP

Where required, special instructions will indicate additional procedures.

EXCLUSIVE TOP

858. EXCLUSIVE DESIGNATION

When an Exclusive TOP is issued, it must be indicated in the appropriate section of the TOP.

859. EXCLUSIVITY

Before an Exclusive TOP is issued, the RTC must verify that no other TOP, Form Y or Form T is in effect within the limits to be covered by the TOP.

An Exclusive TOP must not be issued as a Follow-Up TOP.

860. AFTER ISSUING AN EXCLUSIVE TOP

Within the limits of an Exclusive TOP, the RTC must;

- (a) not issue another TOP;
- (b) not issue a Form T or Form Y;
- (c) not issue a Rule 311, 567.1, 567.2, 618 or 618.1 authority to a movement.

861. EXCLUSIVE TOP – TWO TRACK UNITS

When a second track unit is occupying the limits, both track unit operators must have a thorough understanding in writing as to the operation of each other.

FOLLOW-UP TOP

862. RTC REQUIREMENTS

When one or more movements remain within the limits to be covered by a TOP, the RTC may issue a Follow-Up TOP to a foreman, provided such movements are authorized to proceed in the same direction and have left the location where the foreman will enter the limits of the TOP.

The RTC;

- (a) may only issue the TOP to the foreman when the foreman is at the location where the foreman will enter the limits of the TOP;
- (b) must not issue the TOP if any of the movements are authorized to reverse within the limits; or
- (c) authorize any of the movements to reverse within the limits; and
- (d) before issuing the TOP, verify that each movement has left the location where the foreman will enter the limits; and
- (e) in the TOP, include the designation and location that the last movement has left.

862.1 OPTIONAL RTC REQUIREMENTS

When one or more movements remain within, are, or will be authorized into the limits to be covered by a TOP, the RTC may issue a Follow-Up TOP to a foreman, provided such movements are authorized to proceed in the same direction.

The RTC must;

- (a) specify the designation of each movement on the TOP; and
- (b) not authorize any of the movements to reverse within the limits.

863. FOREMAN REQUIREMENTS

When a Follow-Up TOP has been issued to a foreman and one or more movements remain within the limits of the TOP, the foreman, or any employees for whom the foreman is responsible, must;

- (a) not enter the limits of the TOP except at or behind a location which the designated movement has left;
- (b) not pass the designated movement within the limits of the TOP.

863.1 OPTIONAL FOREMAN REQUIREMENTS

When a Follow-Up TOP has been issued to a foreman, the foreman or any employee under the foreman's protection must not;

- (a) enter the limits of the TOP except at or behind a location which all designated movements have left; or
- (b) pass the designated movements within the limits of the TOP.

TOP CANCELLATION

864. TOP CANCELLATION

- (a) The foreman must advise the RTC of the TOP number to be cancelled;
- (b) the RTC must state the TOP number and limits of the TOP to be cancelled which must be acknowledged as correct by the foreman;
- (c) the RTC will state the TOP number, "cancelled" and the initials of the RTC which must be repeated by the foreman; and
- (d) the cancellation does not take effect until it has been correctly repeated and acknowledged by the foreman.

<p style="text-align: center;">CONTRACTORS WORKING ON ONTC PROPERTY NEAR RAILWAY TRACKS</p>
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The following procedure is to be followed when it is necessary for a Contractor to work on Ontario Northland Transportation Commission (ONTC) property near railway tracks.

- The Contractor, through the Contract Administrator, shall contact the District Manager for the Ontario Northland Railway (ONR) to coordinate and schedule their operations on or near ONR property.

Contact: Mr. Chad Martin
District Manager - District # 1
Englehart, Ontario
Office Phone No. (705) 544-2292, Extension 125
Cell No. (705) 545-0725

Contact: Mr. Dave Lallier
District Manager - District # 2
Cochrane, Ontario
Office Phone No. (705) 272-4610, Extension 632
Cell No. (705) 272-9588

- The Contractor shall fully comply with all requirements of ONR in the planning, scheduling and control of his works within the ONR right-of-way.
- The Contractor shall plan and carry out his work in a manner that does not interfere with rail traffic, or cause clearance restrictions.
- Flagging protection for railway traffic will be provided by the ONR upon notification as outlined herein. However, flagmen provided shall not relieve the Contractor from liability for damages to Railway facilities caused by the Contractor's operation.
- The Contractor shall have a responsible person present at all times to whom the Contract Administrator will issue instructions regarding work on ONR right-of-way.
- All communications with ONR shall be done through the Contract Administrator. ONR will not deal directly with the Contractor.
- All instructions from flagmen shall be obeyed immediately by all personnel on site.
- A flagman will be required when any personnel or equipment is working within 15 metres of the centerline of the nearest track, or protective devices where the work, in the opinion of the Contract Administrator or the Railway, may be exposed to or interfere with the operation of the Railway tracks.
- When a flagman is required, the Contractor, through the Contract Administrator, shall provide a written notice at least one week in advance to ensure the availability of flagmen.

SCHEDULE “A”

If prior to work commencing, the Contractor, through the contract Administrator, receives confirmation that such flagmen are not available, the Contractor, through the Contract Administrator, shall reschedule the proposed work to a date and time when such flagging protection will be available.

- In no case shall the Contractor or any of his equipment or personnel work closer than 15 metres from the centerline of the nearest track without prior consent of the Contract Administrator.
- No construction equipment, materials, or debris shall be permitted to be used, stored, dropped, or allowed to accumulate within 15 metres of overhead cable and posts.
- All equipment must stop working on the approach of any train when said equipment is on ONR right-of-way or within 15 metres of the centerline of the nearest track.
- The Contractor shall ensure that both rails of the same tracks are never connected with any conductor of electricity, such as steel measuring tapes or metal traction equipment.

Fiber Optic Cable

Along much of ONR's right-of-way lies buried fiber optic cable. A cable locate must be done prior to any work taking place. A locate request can be completed online at <https://www.ontarioonecall.ca/portal/> or by calling 1-800-400-2255.

ONR Railway Flagging Policy and Costs

The Contractor shall be responsible for payment of flagman protection costs. Flagging protection will be billed out by the ONR in accordance with the following:

Any occupation or crossing of the operating railway right-of-way not covered under a license of occupation or private crossing agreement **MUST** be protected by a railway flagman.

Arrangements for flagging protection are to be made by the Contractor, through the Contract Administrator, at least one week in advance by contacting the appropriate District Manager at the numbers provided above.

Flagging protection will be billed out as per the attached “Railway Flagging Protection Policy”.

ONTARIO NORTHLAND TRANSPORTATION COMMISSION RAILWAY FLAGGING PROTECTION POLICY

Work or other activity (on, over or under) or within 15 metres of ONTC's track may impact upon the safe use of the track. Consequently, it is essential that qualified ONTC personnel provide flagging protection when personnel, equipment or vehicles are going to be (on, over or under) or within 15 metres of the track for any purpose. Workers must follow the directions and instructions of the ONTC personnel providing the flagging protection, at all times.

Emergency Situations

There is no exception made to the requirement for flagging protection even when a condition arises where the reliability or safety of an installation or of equipment or the safety of personnel is at risk.

Grade Crossing Exemption

All crossings, equipment or structures encroaching onto railway lands require approval by ONTC, a signed licence agreement with ONTC and (in some cases) proof of insurance. If a person or business has fulfilled the requirements and has obtained a licence agreement for a grade crossing from ONTC, they are permitted to cross the track over their approved crossing – if the way is clear and safe.

Snow removal and brush clearing are subject to specific exemptions and requirements.

Procedure

Arrangements for flagging protection are to be made at least one week in advance by contacting the appropriate District Manager at one of the following numbers:

District # 1	Chad Martin	(705) 545-0725
District # 2	Dave Lallier	(705) 272-9588

Unless otherwise authorized by the Director of Rail Infrastructure, all fees, as listed below, are to be paid by the applicant. The applicant is to provide a Purchase Order number at the time the arrangements are made with the District Manager.

Billing is based on an hourly rate including travel time, rounded up to the nearest full hour – plus applicable taxes. Rates are provided below.

Service (\$ per hour)	ONTC Fiscal Year					
	2023-24		2024-25		2025-26	
	Regular	Overtime	Regular	Overtime	Regular	Overtime
Flagging - hirail included	\$146.50	\$202.00	\$150.00	\$206.7	\$153.00	\$210.85
Flagging - hirail operator only	\$111.00	\$166.50	\$113.40	\$170.10	\$115.70	\$173.55

Office of the Director of Rail Infrastructure
March 2023

FOR RAIL EMERGENCIES CALL: 1-800-558-4129 Ext. 141

DATE FORMALIZED April 6, 2023 REVISED	Electrical Safety Policy
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POLICY STATEMENT

In keeping with our values of Safety Full Stop, Go Beyond, Lead the Way and Never Stop Caring Ontario Northland Transportation Commission (ONTC) commits to ensuring that all employees who may be exposed to electrical hazards associated with their work have the knowledge, skill, tools, and equipment needed to ensure their safety.

In our efforts to Go Beyond our minimal requirements, ONTC commits to continuously improving our safe work practice by striving to incorporate the Workplace Electrical Safety standard, CSA Z462.

All authorized employees will ensure the power supply to electrical installations, equipment, or conductors is disconnected, locked out of service, connected to ground, and tagged before any work is done. **It is a requirement that, where possible, all hazardous energy sources are reduced to and maintained at a ZERO ENERGY state before starting any electrical work.** Should it become necessary that maintenance, cleaning, or adjustments need to be performed on any piece of equipment while it is in operation, safe work procedures for this type of work shall be made available and easily accessible. Only authorized employees shall be allowed to perform such work.

PURPOSE

To ensure employee safety by allowing only **Authorized Employees, Qualified Persons, Certified Electricians** or **Electricians in Training (EIT's)** who are under direct supervision of a **Certified Electrician** to do electrical work such as connect, maintain, or modify electrical equipment or installations at ONTC work locations.

To ensure that all ONTC employees or contractors working for ONTC comply with the Canada Labour Code, Occupational Health and Safety Act, associated regulations and ONTC procedures.

APPLICATION AND SCOPE

This procedure applies to all ONTC workers and contractors at all workplace locations. The procedure applies whenever exposure to a hazardous energy may occur while servicing, installing or maintaining, machinery or equipment.

DEFINITIONS

Affected employee – persons who are not directly involved in the work requiring the hazardous energy control, but who are (or may be) located in the work area.

Authorized employee – a qualified person who, in their duties or occupation, is obliged to approach or handle electrical equipment; or a person who, having been warned of the hazards involved, has been instructed or authorized by a qualified Supervisor or management member.

Certified Electrician – Electricians who have obtained a 442A Industrial or a 309A Construction certificate of qualification.

Control Device – means a device that will safely disconnect electrical equipment from its source of energy.

Electrical Equipment – means equipment for the generation, distribution, or use of electricity.

Electrician in Training (EIT's) – Aspiring electrician's registered with Skilled Trades Ontario who must complete specific criteria, a set number of hours, and a final test to be eligible to become a **Certified Electrician**.

Isolated – means separated or disconnected from every source of electrical, hydraulic, pneumatic, or other kind of energy that is capable of making electrical equipment dangerous.

Qualified Person – One who has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations and has received safety training to identify hazards and reduce the associated risk.

RESPONSIBILITIES

Employer is responsible to:

1. Provide training and instruction on the Electrical Safety Policy and LOTO program.
2. Properly implement and periodically audit the Electrical Safety Policy and LOTO program.
3. Provide single key locks and tags as well as other LOTO equipment and maintain records of issuance of lock.
4. Provide all relevant PPE to ensure staff are performing their tasks in a safe manner.
5. Prequalify and approve contractors who work at any ONTC location.
6. Discipline, ensuring authorized and affected personnel perform their duties within the requirements of the LOTO Procedure.

Managers/Supervisors are responsible to:

1. Communicate any actual and potential hazards of which they are aware;
2. Apply and enforce the LOTO Program for all personnel in the workplace.
3. Identify those personnel who are authorized and affected and trained in accordance with this policy.
4. Periodically inspect the work area to ensure compliance with this policy;
5. Ensure that only authorized workers perform LOTO, and that work is performed in compliance to the procedure.
6. Provide written instructions as required; and
7. Provide to workers, company supplied LOTO equipment and PPE as required.

Workers and contractors of ONTC are responsible to:

1. Comply with the Electrical Safety Policy and LOTO Procedure.
2. Notify their supervisor or contact person of any questions or concerns with respect to LOTO.
3. Participate in electrical safety training as required.
4. Provide input on the effectiveness of the LOTO Procedure and participate in annual reviews of the electrical safety policy and LOTO Procedure as required.

5. Achieve a zero-energy state where hazardous energy may harm a person and ensure proper LOTO is achieved.
6. Ensure all power sources remain locked out before resuming work after a temporary absence.
7. Ensure only single keyed locks are used. The key must remain in the direct possession of the authorized person engaged in lockout.
8. remove only the locks that have been assigned by ONTC; and
9. avoid using a Point of Operation switch or controller for the sole Lockout of a device or piece of equipment unless it has been designed to accommodate an energy isolating device.

ELECTRICAL SAFETY RULES

1. A sign warning of the danger, and forbidding entry by unauthorized persons will be posted at the entrance to a room or similar enclosure containing exposed live electrical parts.
2. Any piece of equipment or tool found to be damaged or have defective electrical components or found to pose a safety or health hazard to any employee will be disconnected and removed from service without delay and must be tagged appropriately.
3. Any tool or piece of equipment that is capable of conducting electricity and/or endangering the safety of any worker will not be used around or close to any live electrical installation or equipment that might cause electrical contact with the live conductor.
4. Flammable materials/liquids shall not be stored anywhere near electrical equipment.
5. Eye protection must be worn when carrying out a work assignment.
6. Consider all electrical equipment to be live until you have properly tested it to confirm it's dead.
7. Do not work on "live" equipment unless it is absolutely necessary. If it is necessary, a safe work procedure must be in place.
8. If it is necessary to work on "live" equipment wear rubber gloves and work from a dry location.

9. Do not close any switch without knowledge of the circuit and the reason the switch was left open.
10. Notify the persons affected before the power on any circuit is shut off.
11. All electrical equipment of 110 volts or over must be grounded. Circuits sometimes retain a charge.
12. Portable electrical equipment used outdoors or in damp locations must be equipped with a ground fault circuit interrupter installed at the receptacle or on the circuit at the panel.
13. Specially authorized persons and electricians are the only ones permitted to change fuses.
14. Rubber gloves, tools and equipment must be maintained in good condition.
15. Do not handle “live” wires while standing in water or on moist or steel surfaces.
16. Electrically driven machinery and controls should normally be locked out before servicing. However check with your Supervisor to be sure.
17. Only persons authorized to do so may enter any electrical room and/or enclosure containing live parts. The entrance to any electrical and/or enclosure containing live parts will be marked by conspicuous warning signs stating that entry by unauthorized persons is prohibited.

TRAINING

Employees exposed to an electrical hazard when the risk associated with that hazard is not adequately reduced by the applicable electrical installation requirements shall be trained to understand the specific hazards associated with electrical energy.

- Safety-related work practices and procedural requirements necessary to provide protection from the electrical hazards associated with their job or task assignments; and
- They shall be trained to identify and understand the relationship between electrical hazards and possible injury.

Qualified persons shall be trained in and knowledgeable about the construction and operation of equipment or a specific work method and trained to identify and avoid the electrical hazards that might be present with respect to that equipment or work method. The training required shall meet the requirements of the CSA Z462.21 and may include classroom, on-the-job, electronic, or web-based training methodologies with interactive components.

Employees involved in or affected by the lockout procedure must be trained in the lockout procedure and their responsibility in the execution of the procedures.

Retraining in the lockout procedure shall be performed:

- When the procedures are revised;
- At intervals not to exceed 3 years; and
- When supervision or annual inspections indicate that the worker is not complying with the lockout procedure.

Employee training must be documented to confirm that each employee has received the training and retained for the duration of the employee's employment. The documentation must include

- when the employee demonstrates proficiency in the work practices involved
- contain the content of the training, each employee's name, and date of the training.

REFERENCES

Part II Canada Labour Code R.S.C, 1985, c. L-2

Published by the Minister of Justice at the following address:

<http://laws-lois.justice.gc.ca>

Implementing an Occupational Health and Safety (OH&S) program November 2017 DSS Catalogue Number CC273-2/17-1E Canadian Centre for Occupational Health and Safety (CCOHS): www.ccohs.ca

Occupational Health and Safety Act (R.S.O. 1990, c. 0.1) Consolidated Edition, Carswell

Workplace electrical safety, CSAZ462:21 CSA Group., July 20214

DATE FORMALIZED June 21, 2018 REVISED April 13, 2022	HOT WORK PROGRAM
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POLICY STATEMENT

In keeping with our values of safety, accountability, and continuous improvement Ontario Northland Transportation Commission (ONTC) is committed to the safety and health of all its employees by ensuring that all hazards associated with hot work is properly recognized, assessed and controlled.

PURPOSE

To establish the minimum requirements for the safe performance of hot work when conducting hot work at any ONTC location, and to ensure that all measures are taken to eliminate any risk that is generated by welding, cutting, grinding, soldering, or blazing.

APPLICATION AND SCOPE

This policy applies to any ONTC division, department, and employee who is required to perform hot work at any time during their work.

POLICY

All hot work jobs or projects are to be authorized by a manager, supervisor, designate or identified in daily work schedules and/or job descriptions.

All hot work must be performed by a competent worker who has the knowledge and training in the work being performed as per the identified risks associated with the work.

A competent person will be designated to monitor all hot work activities ensuring all procedures are being followed, and to conduct a fire watch for dangerous sparks.

When hot work is required on a rail car that contains a commodity or residue that is either a flammable gas, flammable liquid, or a liquid with a flash point below the ambient temperature or the temperature in the rail car, the work is to be conducted outside (provide location) and is only permitted when all safety precautions outlined in this procedure have been met and adhered to by personnel who have been trained to assess and control the hazards associated with hot work.

DEFINITIONS

Flammable Commodity:

A commodity that is a flammable gas, a flammable liquid or a liquid that has a flash point below the ambient temperature or temperature inside the rail car.

Flammable Gas:

A gas that has an LEL of less than 13 percent by volume in air or flammable range of more than 12 percent.

Flammable Liquid:

A liquid having a flash point below 37.8°C (100°F), also known as an NFPA Class I liquid.

Flash Point:

The temperature at which a liquid produces enough vapour to ignite in the presence of a suitable source of ignition.

Gas Tester:

Person assigned to perform required testing on/in a confined space, restricted space, railcar, etc. to ensure the area is safe to work on and/or identify control measures required to eliminate risk.

Hot Work:

For the purposes of this procedure, refers to any operation, process, or the use of anything that creates a source of ignition. Hot work includes, but is not limited to: welding, cutting torches, gouging, and the use of tools and equipment that are not intrinsically safe.

Lower Explosive Limit (LEL):

The minimum concentration of a flammable gas mixed with air, where an explosion or deflagration may occur in the presence of a suitable ignition. This concentration is expressed in percent by volume, where 1 percent represents 10,000 parts per million.

Tester:

A competent person who is responsible for making determinations of the conditions in or around the area of work, and has completed appropriate training on the measurement instruments and procedures used to perform the evaluation.

Vapour:

A gas given off by a substance that is normally a liquid at room temperature.

MATERIAL REQUIRED

Hot Work Hazard Assessment and Full task Observation Sheet
Norfalco Acid Tank Car Hazard Safety Inspection Sheet
Personal Protective Equipment
Fire Extinguisher
Testing Equipment – PH Test Paper, Gas Monitoring Equipment
Communication Devices

HAZARDS

This procedure describes some of the potential health hazards associated with welding fumes and gases. It also discusses the control and management of these hazards.

Welding produces metal fumes and gases that can make you sick. The risk depends on:

- The welding method (such as MIG, TIG, or stick)
- What the welding rod (electrode) is made of
- Filler metals and base metals (such as mild steel and stainless steel)
- Paints and other coatings on the metals being welded
- Ventilation

In confined spaces, welding can be much more dangerous. With less fresh air, toxic fumes and gases can be much stronger. Shielding gases, like argon, can displace the oxygen and kill you.

The two most common types of welding used are:

- The electric arc welding of metal using a flux-coated electrode (manual metal arc welding, MMAW, SMAW); and
- The electric arc welding of metal using a gas-shielded wire electrode (gas metal arc welding, GMAW).

Welding Fumes

Cadmium – may be present as a coating in certain materials being welded. Cadmium oxide fume on inhalation may cause acute irritation of the respiratory passages, bronchitis, chemical pneumonia or excessive fluid in the lung tissues (pulmonary oedema). There may be a latent period of several hours between exposure and onset of symptoms. The effects of overexposure to cadmium fumes may resemble metal fume fever initially. A single exposure to a very high concentration of cadmium oxide fume may be fatal. Chronic cadmium poisoning results in injury to lungs and kidneys.

Manganese – potential exposure to manganese occurs whenever this metal is used in electrode cores and coatings or in electrode wire. Acute poisoning from oxides of manganese is very rare in welders, although respiratory tract irritation from the fume may occur. Exposure to fume from welding on manganese steel may give rise to acute

inflammation of lungs. Metal fume fever is also a possibility after exposure to manganese fume. Chronic manganese poisoning, characterized by severe disorder of the nervous system, has been reported in welders working in confined spaces on high manganese steels.

Zinc – may be present as a surface coating on steel products, that is, galvanized steel. Exposure to freshly formed zinc oxide fume may produce a brief acute self-limiting illness known as metal fume fever, zinc chills or brass founder's ague. The symptoms, which resemble those of an acute attack of influenza, usually occur several hours after exposure to fume and usually with complete recovery within about 24 to 48 hours. Freshly formed oxide fume from several other metals has also been reported to cause metal fume fever. Leucocytosis, a transient increase in white blood cell counts, is reported to be a common finding in metal fume fever, but is not known to be common among welders.

Iron – most welding involves ferrous materials. The most abundant constituent of ferrous alloy welding fume is iron oxide. Long, continued exposure to such welding fume may lead to deposition of iron oxide particles in the lungs. When present in sufficient quantities, the deposition is demonstrable on chest x-ray films as numerous fine discrete opacities (nodulation and stripping) resembling silicosis. The technical name for this is siderosis and it is a benign form of pneumoconiosis. Siderosis tends to clear up when the exposure to metallic particles stops.

Molybdenum – Molybdenum is found in some steel alloys. Molybdenum fumes may produce bronchial irritation and moderate fatty changes in the liver and kidneys.

Fluorides – Welders may be exposed to fluoride dust, fume and vapours from certain MMAW and GMAW operations. Fluoride fumes may produce irritation of the eyes, throat, respiratory tract and skin. Chronic fluorosis is a syndrome characterized by an increased density of bones and ligaments due to fluoride deposition. However, no corroborating data are available which identify a relationship between exposure to fluoride-containing welding fumes and disorders of bones or ligaments.

Other Metals – Welding may produce fume from other metals, including aluminium, copper, magnesium, tin, titanium and tungsten. Within the confines of the current information available, no serious health disorders in welders are known to occur from exposure to fume from these metals but, under certain conditions, copper, aluminium and magnesium may give rise to metal fume fever and others to irritation of the respiratory tract.

Beryllium is a volatile and toxic component that may be present in many copper alloys being welded, that is, in the work piece itself. Beryllium oxide fume is very toxic to the respiratory tract, lungs and skin, and is quick acting. Beryllium is suspect human carcinogen. Note that beryllium may also be present in some aluminium or magnesium brazing alloys.

Gases

Oxides of nitrogen – The oxides of nitrogen, nitric oxide and nitrogen dioxide, are frequently formed by the direct combination of oxygen and nitrogen in the air surrounding

the arc or flame, as a result of heat from the electric arc or gas torch (oxidizing flames). In outdoor or open shop welding, hazardous abnormal concentrations are unlikely, except perhaps for short periods. In confined spaces, hazardous concentrations of nitrogen oxides may rapidly build up in welding operations. High concentrations of nitrogen oxides have also been found during gas tungsten-arc cutting of stainless steel.

Exposure to oxides of nitrogen may not always produce immediate effects but may result in fatal excessive fluid in the lung tissues (pulmonary oedema) some hours after the exposure stops.

Ozone – is formed only in small amounts in MMAW and in gas welding. It is however, produced in significant amounts in GMAW when welding with argon, especially when high amperages are used. High ozone concentrations are especially a problem when welding on reflective surfaces, such as aluminum and its alloys and stainless steel, and with high-energy processes such as plasma arc welding.

Phosphine – Phosphine is generated when steel coated with a rust proofing compound is welded. High concentrations of phosphine gas are irritating to the eyes, nose and skin. There may also be serious effects on the lungs and other organs.

Insufficient – oxygen in GMAW, the presence of inert gases (argon, helium) in confined work environments may reduce the oxygen content of the atmosphere to dangerous levels, with the threat of asphyxiation. See also the section on carbon dioxide in this procedure.

Pyrolytic products of resins used in primers / paints – the main products of thermal decomposition of resins used in primers and paints are carbon monoxide and carbon dioxide. Specific toxic or irritant chemicals given off from the resins used in priming materials include such hazardous substances as phenol, formaldehyde, acrolein, isocyanates and hydrogen cyanide. Usually, a very complex mixture of organic gases is formed.

HEALTH EFFECTS

SHORT TERM

Metal fume fever – Metal fume fever occurs in welders who inhale zinc oxide fumes, although other components, for example, copper, aluminum and magnesium, may also produce this condition. Symptoms of metal fume fever, which resemble influenza, usually occur several hours after exposure and include a metallic or sweet taste, chills, thirst, fever, muscle aches, chest soreness, fatigue, gastro-intestinal pain, headache, nausea and vomiting. The symptoms usually subside within one to three days of exposure with no residual effect.

Exposure to ozone – Exposure to ozone generated in GMAW and plasma arc welding may produce excessive mucus secretion, headache, lethargy, eye irritation and irritation and inflammation of the respiratory tract. In extreme cases, excess fluid and even hemorrhage may occur in the lungs. The irritant effects of the gas on the upper respiratory tract and the lungs may be delayed.

Exposure to nitrogen oxides – Nitrogen oxides produce somewhat similar respiratory tract effects to ozone. Inhalation of nitrogen oxides does not always produce immediate irritant effects but may result in excessive fluid in the lung tissues (pulmonary oedema) some hours after exposure ceases.

Control Measures

Where there is a likelihood of worker exposure to welding fumes and gases, steps should be taken to minimize that exposure. A thorough examination of work practices is essential. Procedures should be adopted to ensure that workers are not exposed to the hazard. Control measures include, but are not limited to the following, which are ranked in priority of their effectiveness:

Elimination/Substitution

- Remove the hazard from the workplace, or substitute (replace) hazardous materials or machines with less hazardous ones

Engineering Controls

- includes designs or modifications to equipment, ventilation systems, and processes that reduce the hazard at the source of exposure

Administrative Controls

- altering the way the work is done we can reduce the exposure along the path i.e. policies, and **work practices** such as standards and operating procedures (including training, housekeeping, equipment maintenance, and personal hygiene practices) Conduct pre-assessment of work to identify all hazards

Personal Protective Equipment

- Equipment worn by individuals to reduce exposure such as contact with chemicals or exposure to noise

The control measures in this procedure are intended to assist anyone conducting hot work with identifying and controlling all hazards associated with the nature of the work. All hazards identified in the hazard assessment not identified in the procedure shall be controlled using this hierarchy first always looking to eliminate.

PROCEDURE

Welding, cutting, grinding, soldering and brazing in construction, maintenance, and fabricating activities present a significant opportunity for fire and injury.

Hot work presents an increased risk of fire and explosion hazard when it is performed in a confined and enclosed space. If performing Hot Work in a confined space, please refer to the confined space policy and procedure.

The following procedures are the minimum standard that ONTC anticipates its workers and contractors to achieve for all hot work performed.

1. Inspect the work area and consider the following:
 - Ensure that all equipment is in good operating order before work starts.
 - Ensure that all appropriate personal protective devices are available at the site.
 - Look for combustible materials.
 - Move all flammable and combustible materials away from the work area.
 - Sweep clean any combustible materials on floors around the work zone.
 - Remove spilled grease, oil, or other combustible liquid.

If combustible materials can't be moved:

2. If combustibles cannot be moved, cover them with fire resistant blankets or shields. Protect gas lines and equipment from falling sparks, hot materials, and objects.
3. Secure, isolate, and vent pressurized vessels, piping and equipment as needed before beginning hot work.
4. Post a trained fire watch within the work area, including lower levels if sparks or slag fall during welding, including during breaks, and for at least 30 minutes after work has stopped. Depending on the work done, the area may need to be monitored for longer (up to 3 or more hours) after the end of the hot work until fire hazards no longer exist.
5. Inspect the area following work to ensure that wall surfaces, studs, wires, or dirt have not heated up.
6. When work is completed ensure all compressed gas valves are closed and the cylinders are properly stored and secured safely.

Hot Work on Residue/Loaded Rail Cars

Before performing any work on a rail car ensure the following:

Before performing any work on a car containing acid caution must be given to the following risks:

- 1) The tank is still under pressure – highest risk
- 2) The tank will release acid gases/mists when opened and previously checked for pressure

The first time the tank is opened workers should wear a full face shield and protective clothing (e.g. polycoated Tyvek and gloves), and a ½ mask respirator equipped with a stacked P100/acid gas cartridges (or a full face respirator in lieu of the face shield).

Subsequent access if necessary may be limited to respiratory protection for acid gases/mists and gloves, but should not occur unless necessary.

1. The Manager of Quality Assurance shall determine the last contents and, where possible, the paint system used on the car to be worked on. This shall include, as applicable, the review of shipping documents and/or any other documentation or information as appropriate to verify the last contents or the paint system used.

Identification by the commodity stencilled on the car is not sufficient for content determination.

2. Where the car is found to contain an acid commodity a **Hazard/Safety Inspection Assessment Nor Falco Acid Tank Car** form must be completed by the Quality Assurance inspector to indicate if the car has passed or failed.
3. Prior to engaging in any hot work the person conducting the testing shall:
 - a. Identify and record the contents of the tank on the **Hot Work Hazard Assessment and Task Observation** sheet.
 - b. Test for oxygen and then LEL at and around the manways, valves, or other potential sources of flammable gases that are within the distances outline in Section 3.
 - c. Stop any leaks as practicable prior to continuing and record this on the Hot Work Hazard Assessment and Task Observation form.
 - d. Record the final results of the testing on the Hot Work Hazard Assessment and Task Observation sheet.
 - e. Where a car's last commodity contains an acid perform PH testing on the car to ensure there is no acid residue remaining on or in the car
4. When a car contains a flammable commodity, no welding, gouging, flame cutting or similar operation is permitted within 15.4 meters (50 feet) and any other type of hot work is not permitted within 4.6 meters (15 feet) until the identified hazards on the **Hot Work Hazard Assessment and Task Observation** sheet have been controlled.
5. Once safe work condition is met, hot work may proceed only after the assigned worker(s):
 - a. Examines the Hot Work Hazard Assessment and Task Observation sheet and identifies the following items before commencing work:

- Car Number: verify that the number on the car is the same as that identified on the Hot Work Hazard Assessment and Task Observation sheet
 - Test results: verify that the air test meets the Hot Work Hazard Assessment and Task Observation sheet condition, also verify that the test results were conducted on the same shift and date the hot work is to be performed.
- b. Ensure that no other processes or operations are being performed in the area that could contaminate the work area with a significant amount of flammable gas, or that continuous monitoring occurs.
 - c. Ensure that if a combustible insulation is present, a suitable means to extinguish a fire is immediately available.
 - d. Ensure that all equipment to be used is inspected, in good condition and properly used and this is documented on the **Hot Work Hazard Assessment and Task Observation** sheet.
 - e. Ensure that required personal protective equipment is inspected, in good condition, used properly and is documented on the **Hot Work Hazard Assessment and Task Observation** sheet.
 - f. Ensure you print your name and initials on the **Hot Work Hazard Assessment and Task Observation** sheet.
 - g. Ensure that continuous monitoring is in place.
6. Hot work may normally only proceed when the LEL is zero, except where the source of flammable gas is clearly known and continuous monitoring is performed to ensure that the levels do not exceed 10 percent of the LEL.
 7. The tests conducted are valid for no more than the present shift, including overtime hours where applicable.
 8. Welding on the tank car shell of an uncleaned car containing a flammable commodity or residue is strictly prohibited. Welding on reinforcing pads of rail cars which are directly attached to the shell is permitted providing:
 - The welder is qualified and certified
 - No part of the weld is deposited on the tank shell
 - Continuous monitoring in the location of the hot work
 9. The ground connection for welding is to be attached directly to the part to be welded whenever practicable or as near as possible to the weld area
 10. A fully charged 20lb ABC fire extinguisher shall be readily available to the hot work area. In remote locations where work will be performed on a car containing a flammable commodity or residue, it is mandatory to have two (2) fully charged 20lb ABC fire extinguishers. One (1) in close proximity to the hot work site and the other one in an easily accessible location close by.

11. Where individuals are performing hot work on an uncleaned railcar radios must be available to ensure an effective means of communicating during an emergency. This process must be included in the site emergency response plan.
12. If a combustible insulation is present, a suitable means to extinguish a fire must be immediately available when welding, gouging, flame cutting or a similar operation is being performed.
13. When welding, gouging, flame cutting or a similar operation is to be performed, significant quantities of highly combustible materials (paper, wood chips, textile fibres, grass, etc.) must not be within 10 meters (35 feet) of the welding operation. If you are unable to relocate the highly combustible materials, they must be covered with a flame resistant tarp.
14. When welding, cutting, gouging or a similar operation is to be performed on the surface that has a paint system applied to it, using the hierarchy of controls appropriate precautions shall be taken to ensure that the person is not exposed to airborne concentrations above the applicable exposure limits established by the ACGIH or Provincial Legislation, whichever is most restrictive. This may include, but is not limited to:
 - Blasting the area clean prior to the performance of the work
 - Using stripping products to remove coatings, making sure to remove any residue before welding
 - Use wet slurry vacuum removal techniques for removing very toxic coatings
 - Do not grind coatings. Grinding dust may be toxic.
 - The use of engineering controls (e.g., ventilation)
 - The use of appropriate respiratory protection
15. Prior to performing hot work on the jacket of a car containing flammable commodity or residue the following must be completed:
 - a. Test the jacket space for any flammable gas local to the work area, through:
 - b. an existing access point to in the jacket space
 - c. or by creating an access point, local to the work area, into the interstitial space between the shell and jacket using a pneumatic or intrinsically safe drill and keeping the drill bit and work area cool with a suitable coolant.
16. Where any amount of flammable gas is found, the source shall be determined, and if the source is from inside the jacket space it shall be eliminated or controlled

prior to any hot work being performed. Record this on the **Hot Work Hazard Assessment and Task Observation** sheet.

17. If it is reasonably believed that the jacket space may become contaminated with a flammable gas during performance of the work (e.g. product leaks from a tank) then the jacket space shall be continuously monitored.
18. Where contamination is found in the jacket space other than a flammable gas (e.g. sulphur), an assessment of the hazards shall be made and appropriate precautions taken to protect the health and safety of the worker.
19. If the **Hot Work Hazard Assessment and Task Observation** condition is violated, or there is reasonable cause to believe that it may be violated during the performance of the work (e.g. product leaks from a tank into the area of hot work, leaks from a nearby process), the work shall stop immediately while the source is investigated. Retesting must be performed to ensure that the conditions are safe before continuing. The new findings shall be recorded on the **Hot Work Hazard Assessment and Task Observation** sheet.

RESPONSIBILITIES

Employer:

- Ensure that a written program for hot work is developed and maintained in accordance with all relevant legislation.
- Ensure that the hot work program is developed and maintained in consultation with the workplace health and safety committee and/or policy health and safety committee.
- Ensure that the hot work program and associated documentation is current and available to all workers and contractors (as required) performing any hot work.
- Ensure that an adequate assessment of the hazards related to the hot work being performed has been carried out before any worker begins hot work.
- Appoint a person with adequate knowledge, training, and experience to carry out the assessment and maintain a record containing details of the person's knowledge, training, and experience.
- Ensure all workers are given adequate training in recognition of hazards and safe work practices associated with hot work.
- Maintain adequate training records showing who provided the training, who received the training, and the date the training was provided.
- Provide all personal protective equipment (PPE) required to ensure safe work.

Site Supervisor:

- Ensure a full hazard assessment is completed and any hazards are identified and controlled before hot work begins.

- Where rail car contains a flammable commodity or acid base commodity ensure that the Hot Work Hazard Assessment and Task Observation sheet completed.
- Inspect and monitor all hot work jobs to ensure procedures are being followed, and adequate fire protection is provided for a fire watch on site
- Ensure that all work does not begin until all conditions identified have been met.
- Ensure that all personnel follow this policy and procedure.
- Assign an Observer to watch for dangerous sparks in the area above and below the work being completed.

Manager of Quality Assurance Department:

- When hot work is to be performed on a rail car determine the last contents of the rail car and if possible determine the paint system.
- Perform/delegate required testing on the car to ensure the car is safe to work on and/or identify control measures required to eliminate risk.
- Place an ONTC pass or fail sticker on the car to indicate quality assurance testing complete.

Observer:

- Ensure all conditions, precautions and controls are followed.
- Watch for sparks in the area above and below the work being completed.
- Conduct fire watch at all times including any coffee breaks or lunch breaks for 60 minutes after any hot work has been completed. Maintain a fire watch at thirty min intervals to monitor area for 4 hours after work has been completed, in case of flare ups.

Workers:

- Comply with this program and be fully aware of the contents of relevant assessments.
- Notify the site supervisor of any questions or concerns with the hot work being performed or the hot work program.
- Notify the site supervisor of any contraventions of Part 2 of the Canada Labour Code, H&S regulations, and or any ONTC policies and procedures.
- Ensure all required PPE is in worn when conducting hot work.
- Participate in all required training.
- Inspect all cutting torches, and welding equipment for wear, defective parts and any other safety hazard before beginning any hot work and as often as required by the manufactures instructions.

Workplace/Policy Health and Safety Committee:

- Conduct regular audits to ensure the hot work procedures are being adhered to.
- Participate in policy review and provide recommendations to the employer if required

SWITCHING

1. A car that has been dropped off by a switching company (CN, CP, Railserve, etc.) and contains a flammable commodity, is not to be moved with a Trackmobile or similar equipment until an assessment is made to ensure that it is not leaking excessively.
2. Where a car that is leaking to the point where the airborne concentration of gas is likely to exceed 10 percent of the LEL at the coupler, a buffer car shall be positioned between the leaking car and the Track mobile, or similar equipment.
3. The distance set out in Section 3 of Hot Work on Residue/Loaded Rail Cars shall be considered when a car is to be moved such that the car does not enter an area where the requirements of this procedure would be violated (e.g. welding)
4. A car that contains a flammable commodity shall not be brought indoors unless it is confirmed that it is not leaking and it is being brought into an area that meets the requirements of NFPA 497.

Hot Work Hazard Assessment and Task Observation – RECORD RETENTION

When the work has been completed on Residue/Loaded Rail Cars:

1. Quality Assurance Tags to be removed from the car and the hot work hazard assessment and task observation sheets are filed and maintained for a minimum of 2 years.
2. Records for the testing must be kept for a minimum of three years.

TESTING EQUIPMENT

1. The gas monitoring equipment used for this standard is the VENTIS MX4.
2. Where available, the unit is to be set in the PPM mode for all tests.
3. A functional (“bump”) test must be performed on every instrument prior to each day’s use. A functional test is defined as a brief exposure of the monitor to known concentration of gas(s) for the purpose of verifying sensor and alarm operation. It is not intended to be a measure of accuracy of the instrument. The bump test shall be recorded on the bump test form.
4. A full instrument calibration must be performed monthly using certified concentrations of calibration gas(s) and recorded. Each gas-monitoring unit must have a calibration form, which will be maintained with the unit. Record the unit’s model and serial number, date calibrated and the name of the individual performing the calibration. Enter the full span reading for each sensor and the calibration has used.
5. The recommended calibration gas for the LEL sensor is Pentane.
6. The unit shall have the alarm set at 10 percent for LEL.

TRAINING

Any personnel performing hot work on residue/loaded rail cars must receive applicable training including but not limited to Hazard Assessment, WHMIS, and in some

circumstances Transportation of Dangerous Goods. Employees performing the tasks described in the procedure must also be aware of the commodity present in the particular car they are working on.

Personnel performing calibrations, bump testing, or other gas testing must be trained on the specific use and limitations of the particular gas detection devices they are using.

REFERENCES

1. Canada Labour Code R.S.C., 1985, c. L-2, Part II – Occupational Health and Safety
2. Canada Occupational Health & Safety Regulations (SOR/86-304)
3. PSP-S-03 - PROCOR Limited Standard Responsible Care Standard for Hot Work On Residue/Loaded Rails Cars
4. NFPA 51B - Fire prevention in the use of cutting and welding Processes
5. CSA W117.2-12 Safety in Welding, cutting, and allied processes
6. ANSI Z49.1:2012 Safety in Welding, Cutting, and Allied Processes
7. Canadian Centre for Occupational Health & Safety
http://www.ccohs.ca/oshanswers/safety_haz/welding/hotwork.html

DATE FORMALIZED February 2019 REVISED September 2021	Contractor/Subcontractor
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POLICY STATEMENT

In keeping with our values of safety, accountability, and continuous improvement, Ontario Northland Transportation Commission (ONTC) adheres to the requirements of the Canada Labour Code and all applicable Regulations, by ensuring that all selected contractors and subcontractors meet the set health and safety standards associated with each project.

All work shall be done safely no matter how urgent the job is and ONTC will assure that all contractors and subcontractors working on any ONTC property and/or project will following this guideline, adhering to all health and safety legislation and working in a manner that puts the safety of each employee/worker and the environment as the top priority.

PURPOSE

The purpose of this policy is to ensure that the health and safety of all Ontario Northland Transportation Commission (ONTC) employees, equipment, property and the environment are protected when work is being performed by an outside agency.

To ensure that all contractors retained by the ONTC are compliant with ONTC policies, procedures, standards, and applicable legislation.

To ensure that all contractor employees and ONTC employees are provided with a safe and healthy work environment.

To eliminate or minimize the risk of loss to employees, equipment, property and the environment.

To minimize corporate liabilities.

APPLICATION AND SCOPE

This procedure applies to all ONTC divisions and departments that require the services of an outside agency to perform work at any level.

DEFINITIONS

Adequate: in relation to procedure, plan, material, device, object or thing, means

- a) Sufficient for both its intended use and actual use, and
- b) Sufficient to protect a worker from occupational illness or occupational injury

Competent Person: a person who is,

- a) Qualified because of knowledge, training, and experience to organize the work and its performance
- b) Is familiar with the Occupational Health and Safety Act and/or the Canada Labour Code and the regulations that apply to the work, and
- c) Has knowledge of any potential or actual danger to health or safety in the workplace

Construction: includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project, but does not include any work or undertaking in a mine.

Constructor: a person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by himself/herself or by more than one employer.

Contractor: any person or entity contracted to provide service to ONTC.

Employer: a person who employs one more workers or contracts for the services of one or more workers and includes a contractor or subcontractor who performs work or supplies services and a contractor or subcontractor who undertakes with an owner, constructor, contractor or subcontractor, to perform work or supply services.

Prescribed: means prescribed by a regulation made under the Occupational Health and Safety Act or Canada Labour Code

Project: a construction project whether public or private, including

- a) The construction of a building, bridge, structure, industrial establishment, mining plant, shaft, tunnel, caisson, trench, excavation, highway, railway, street, runway, parking lot, cofferdam, conduit, sewer, watermain, service connection, telegraph, telephone or electrical cable, pipeline, duct or well, or any combination thereof,
- b) The moving of a building or structure, and
- c) Any work or undertaking, or any lands or appurtenances, used in connection with construction

Project Administrator: a person who leads/coordinates work project.

Regulation: the regulations made under the Occupational Health and Safety Act or the Canada Labour Code.

MATERIAL REQUIRED

Contractor Safety Checklist and Orientation Form
ONTC Contractors Safety Requirements & Liability Release Form
Project Hazard Assessment
Contractor Orientation Training Package

PROCEDURE

Before Contractors/Subcontractors begin work/project ensure the following is adhered to:

- Ensure that all contractors on the property are compliant and current with all legislative licensing requirements.
- Ensure that all contractors provide a valid WSIB Clearance Certificate and/or liability insurance before beginning any work on ONTC property.
- Provide orientation training to contractors prior to commencement of work.
- Ensure contractors understand their contractual obligations under this standard.
- Provide a designated ONTC contact person to ensure contractors compliance to ONTC policies, procedures and standards through ongoing work site inspections, communications and reported safety concerns.
- Ensure that application of this standard is delivered and used consistently throughout ONTC operations.

Responsibilities

The responsibility of health and safety can become complex when contractors/subcontractors are procured to conduct work for any ONTC project.

To ensure clarity of responsibility, where a contractor is hired to conduct work for ONTC and the Provincial Occupational Health and Safety Act applies in respect of that work, the Contractor will be deemed the Constructor.

No ONTC employee will be assigned to work on the same project as the general contractor, unless there is an agreement between the Contractor and ONTC determining the contractor as the Constructor.

Where a project requires more than one employer, ONTC may enter into an agreement before the commencement of the project to determine control over the project identifying who will be the constructor.

Employer

The employer is responsible to:

- Ensure contractors, employees, supervisors and managers are adequately aware of the provisions and requirements of the POL Purchasing Policy and Procedure.

- Ensure that contractors, subcontractors and project worker companies are adequately prequalified in accordance with the Contractor Safety Prequalification Form for large projects or projects where the combined value of the project exceeds \$50,000.00 and where ONTC is the Constructor.
- Ensure contractors, subcontractors and project worker companies have agreed with and endorsed in writing, the terms of the Contractor Health and Safety Responsibility Agreement.
- Properly implement and periodically audit the contractor prequalification and safety procedure.
- Ensure that authorized staff comply within the Contractor Prequalification and Safety Procedure.
- Discipline and or remove from the authorized contractors list any contractor that fails to comply with this procedure.

Procurement

The Procurement Department is responsible to:

- Conduct prequalification in conjunction with the Project Administrator for consultants and service providers and ensure the completion of the Contractor Health and Safety Responsibility Agreement and the Contractor Prequalification Form (as required) before any work is initiated on any of the ONTC properties;
- Maintain a list of all service agreements, memorandums of understanding, service contracts; and
- Obtain a current copy of WSIB Clearance Certificates and Insurance Certificate for pre-qualified consultants and service providers.

Project Administrator

The Project Administrator is responsible to:

- Contract a pre-qualified contractor;
- Ensure contractors, subcontractors and project worker companies are prequalified in accordance with the Contractor Safety Prequalification Form;
- Ensure the contractor completes the Contractor Orientation Training with the contractor's workers prior to the beginning of a project;
- Complete with the contractor and maintain the Project Hazard Assessment;
- Request applicable training records, certificates, licenses, and written procedures and measures from the contractor as required;
- Ensure the Contractor Health and Safety Responsibility Agreement is completed by the contractor prior to the beginning of work;
- Conduct Safety briefings with the contractors prior to the work beginning and as required by the project;
- Periodically view the work areas to ensure compliance with the Act, associated regulations and the relevant ONTC safety procedures;
- Respond to safety concerns from contractors and others impacted by a project; and
- Ensure all relevant ONTC safety procedures are being implemented at the project.
- Ensure all contractor has provided SDS for all hazardous product used and that the SDS are readily available if stored on ONTC property.

Where a Contractor is hired to perform work for ONTC and the work is subject to the requirements of the Occupational Health and Safety Act, the Contractor will be the Constructor. The aforementioned duties or similar must be completed by the contractor.

Note: the Contractor – Constructor will be required to utilize their own prequalification and safety contract documents for any and all subcontractors hired to perform work on the project.

Contractors

Contractors are responsible to:

- Employ competent Supervisors and Workers;
- Comply with the Contractor Prequalification and Safety Procedure;
- Complete the ONTC Project Hazard Assessment and Contractor Health and Safety Responsibility Agreement;
- Furnish the ONTC with hard copies of applicable training records, certificates, licenses and written procedures and measures as required;
- Ensure that the Contractor Safety Checklist and Orientation form completed and signed;
- Notify the project administrator of any questions or concerns with Contractor Prequalification and Safety Policies;
- Notify the project administrator of any contraventions of the Act or ONTC's Procedures; and
- Participate in required safety training
- Provide WSIB documentation confirming the contractor is registered and their account is in good standing.
- Provide proof of liability insurance.
- Have all products used in their process evaluated by ONTC personnel prior to the products being brought onto ONTC property. This will be done through the evaluation of Safety Data Sheets (SDS) provided by the contractor/subcontractor.
- Ensure copies of all SDS are readily available.
- Immediately inform designated ONTC contact person of any changes in their process or products used in their operation.
- Prior to entering ONTC property, register with Security, appropriate supervisor or designated ONTC contact person for direction.
- Ensure that all equipment and vehicles are properly maintained and meet prescribed safety standards for that piece of equipment, e.g. no loose pins on backhoe extensions or arms, safety pins and safety features are working properly.

Workplace/Policy Health and Safety Committees

The WHSC/PHSC are responsible to:

- Participate in the development and review of the contractor subcontractor policy, procedure, and applicable forms; and
- Provide a resource to employees in regards to the contractor subcontractor policy, procedure, and applicable forms

Manager Health and Safety

The Manager of Health and Safety is responsible to:

- Provide assistance if needed with prequalification process of contractors as requires by the Purchasing Department and/or the Project Administrator;
- Approve/disapprove exceptions of the Contractor Safety Prequalification process.
- Facilitate in the development and review of the contractor subcontractor policy, procedure, and applicable forms; and
- Apply, audit and discipline compliance specific to the contractor subcontractor policy, procedure, and applicable forms.

TRAINING:

ONTC is responsible to ensure that those ONTC personnel who have duties and responsibilities to act under this procedure are adequately trained in these duties as applicable.

The training shall reinforce the hazard control hierarchy as follows:

- **Elimination:** activities or practices that involve the complete removal of the hazard from the worker in the workplace.
- **Substitution:** involves the replacement of high hazard task or workplace circumstance with a lower hazard task or workplace circumstance.
- **Engineering Controls:** involve creating and using designed infrastructure or equipment to minimize a hazard.
- **Administrative Controls:** involves creating protocols, involving stated obligations and prohibitions that change the way people work.
 - **Warning Signs:** are postings and placards that communicate the presence of a hazard as well as hazard control directives.
- **Personal Protective Equipment (PPE):** involves the use of gear that is worn by the worker to create a barrier between the hazard and the worker. PPE can include gloves, respirators, hard hats, safety glasses, high-visibility clothing, and safety footwear.

The Manager of Health and Safety will ensure that the training is refreshed at adequate frequency.

Retraining will be provided for all authorized workers or contractors whenever there is a change in their job assignments, a change in condition, equipment or processes that present a new hazard, or when there is a change in the Contractor Safety Prequalification Process.

Additional retraining shall also be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in the worker's knowledge or use of the Contractor Safety Prequalification Process. The Project Hazard Assessment will be updated to add any additional hazards and corresponding controls, as required.

PROCEDURE:

General Information

The Project Administrator shall establish practices so that all contractors, subcontractors, or contract workers perform their work in a safe and effective manner and meet all the requirements of the Occupational Health and Safety Act, the Canada Labour Code and the Construction Regulations. The Project Administrator must be adequately familiar with all applicable laws, codes and regulations and be capable of applying them.

Where ONTC retains a “Contractor to act as Constructor”

- ONTC is not responsible for ensuring that the requirements of the applicable regulations are met for contractor activities on site, where ONTC has retained a “Contractor who fulfils the role of the constructor” who fully controls all work at a construction site. (Pre-award, ONTC should ask what a candidate Contractor-Constructor company does to prequalify contractors (and subcontractors) to determine how the Constructor proposes to maintain adequate safety on site. Once the project is awarded, ONTC should not involve itself in the project in any way that could be interpreted as “material control” that is strictly the Constructor’s duty).
- When ONTC retains the “contractor to act as constructor” for construction project: The ONTC does not have the health and safety responsibilities for this type of construction project, as long as the constructor completely controls all work and the ONTC workers are not intermingling in the project and ONTC is not controlling the project in any way.

ONTC will ensure that all contractors/subcontractors are properly trained, ensure that contractors/subcontractors are monitored and that requirements for safety are observed by the contractor, and that procedures for safe conduct of the work are in place and known to contractor employees.

The Project Administrator shall direct the contractor in completion of all applicable documentation, as described by the Contractor Safety Prequalification Procedure. The Project Administrator shall ensure that the constructor maintains full responsibility for safety on the particular job.

If the work is Non-Construction work where ONTC is acting as the “Employer”

The Project Administrator shall review the ONTC’s applicable policies and procedures with the contractors/subcontractors. It is recommended that all contractor/subcontractor workers undergo this training orientation, but it is mandatory that at least the contractor’s supervisor or site superintendent receive the training orientation and then have a method to ensure that this information is passed on to all employees under their direct control. Please note that the requirement of “Lead Employer” must be fulfilled if the work is Confined Space Entry work.

It is the responsibility of the Project Administrator to ensure that the contractor is aware that project specific training is to be conducted.

The Project Hazard Assessment form shall be completed by the Project Administrator and reviewed with all contractors prior to commencement of work.

Contractors/subcontractors that regularly perform services at ONTC must complete a Contractor Training Orientation on annual basis or whenever there is a change in personnel or applicable and safety conditions which may affect the contractor's/subcontractors workers. For project contracts, a Hazard Safety Assessment form will be completed each time the contractor performs a new project, unless the same contract personnel had performed project work of a similar nature within the previous 12 months.

Prequalification

Pre-Qualification of a contractor is designed to ensure that the contractor has:

- Appropriate current and sufficient insurance;
- WSIB Coverage;
- An appropriate and compliant health and safety policy;
- Competent supervisors; and
- A program to completely undertake and control the construction work being conducted at ONTC

When pre-qualifying a contractor who will not act as "Constructor" ONTC shall determine whether the contractor has the specific policies, procedures, training and supervision to perform the job safely and in compliance with all provisions of the OHSA and the applicable regulations. Use the Contractor Safety Prequalification form to fulfill this policy obligation.

If the procurement department is completing the prequalification procedure, input may be required from the Manager of Health and Safety or the Project Administrator if there are specific requirements for a project.

The following items must be submitted by the contractor for prequalification:

- Certificates of insurance – general liability insurance (Minor projects \$2,000,000 minimum, Major Projects \$5,000,000 minimum)
- WSIB Safety Record – submit a copy for the last 3 years or equivalent accident/injury data.
- Current Clearance certificate – Confirms contractor has met reporting and payment obligations to WSIB. ONTC will be required to receive a copy of the clearance certificate every 2 months and before the final payment on the contract has been made.
- Contractor's Health and Safety Policy.
- Past Environmental, Health and Safety Records – a copy for the last 2 years.
- Training and Certification Records – Contractor must provide documentation verifying all workers have received the necessary safety training required for the specific job.
- Hazardous material list – the contractor must submit a list of all hazardous materials that will be brought onto ONTC property.
- ONTC may require a separate work plan detailing higher hazard work activity or any tasks that may tend to produce adverse.

The Project Administrator will ensure that the Contractor Health and Safety Responsibility Agreement has been completed by the contractor.

The Project Administrator will ensure current copies of insurance, and WSIB clearance certificates, and annual safety reviews are maintained for pre-qualified contractors.

Contractors that have already been pre-qualified should be reasonably favoured and used for OTNC projects.

Project Management

In all circumstances except where a Contractor has formally taken on the role of Constructor, the Project Administrator is responsible for the health and safety on the project, and must halt the project if there are health and safety concerns. The Project Administrator must maintain communication with the contractor throughout the project.

The Project Administrator will be responsible to ensure that all health and safety documentation for the project is completed and maintained.

The Project Administrator is responsible to obtain an ONTC Project Assessment Folder and complete it with Contractor prior to any work beginning.

- Signed Contractor Safety Responsibility Agreement;
- Certificates of Insurance – General Liability Insurance;
- WSIB Safety Record;
- Current Clearance Certificate;
- Contractor's health and safety policy and procedures applicable to the work being conducted;
- Training, licensing and certification records;
- Hazardous materials list and current SDS for material brought onto ONTC property and already onsite that will be used during or encountered during the project;
- Completed Contractor Orientation Training Records;
- And copies of any applicable ONTC procedures that have been reviewed; and
- Completed Contractor Prequalification form.

The Project Hazard Assessment form must be filed once the project has been completed and made available for review if required for auditing purposes.

The Project Administrator must ensure that the Contractor Orientation Training is completed for all workers on the project.

On-Site Safety – All ONTC safety procedures (Fall protection, Confined Space Entry, Lockout/Tagout, Ladder Safety, WHMIS, Personal Protection Equipment, Respiratory Protection, etc.) apply at all construction on ONTC projects.

The Project Administrator shall review all applicable safety procedures with contractors/subcontractors at the site. Copies of the ONTC procedures can be obtained through the Project Administrator.

The Project Administrator will ensure that daily safety briefings are conducted prior to the beginning of each project work day, as well as regularly inspect the work site as the project requires.

If the contractor or subcontractor has a question or concern regarding safety on the project, they should speak to the Project Administrator or their immediate supervisor.

All contractor(s) or subcontractor(s) supervisors must report to the Project Administrator:

- Any unsafe actions or conditions,
- Contraventions of the OHSA/CLC and regulations or any ONTC safety procedure, or
- Existence of any hazard at the project.

Any incident (first aid, near miss, etc.) on the project must be immediately reported to the Project Administrator.

NOTE: Workers and their supervisors shall be held accountable for violations of health and safety rules, regulations, and procedures. Disciplinary action, where necessary, will be dictated by the ONTC disciplinary procedure and will be based on the merits of the specific case.

APPENDICES/EDUCATIONAL MATERIAL:

- Contractor Safety Prequalification Form
- Contractor health and Safety Responsibility Agreement
- Contractor Orientation Training Checklist
- Project Hazard Assessment

REFERENCES:

- Ontario Occupational Health and Safety Act R.S.O 1990
- O.Reg 213/91 Construction Projects
- Canada Labour Code R.S.C., 1985 c L-2
- Canada Occupational Health and Safety Regulations SOR/86-304
- Contractors Subcontractors Safety NBRHC OH&S4-017



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 039

Description: Demolition of Various ONTC Buildings

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 Demolition of Various ONTC Buildings 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-A.

Purchase is subject to budgetary approval of expenditures.

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.

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 – Draft Agreement 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.

“Canadian Trade Partner Country”: A country that is signatory to one or more of the following trade agreements:

- Comprehensive Economic and Trade Agreement (CETA);
- World Trade Organization's Agreement on Government Procurement (WTO-GPA);
- Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP); or,
- Canada-UK Trade Continuity Agreement (Canada-UK TCA).

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 2 *cont'd*
RESPONDENT'S GENERAL INFORMATION

Main Contact Person *(for the purposes of this Proposal)*

Name	
Title	
Telephone #	Fax #
E-mail address	

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 draft agreement included in Part 5 of this RFP using the table below. ONTC does not have any obligation to accept any proposed changes to the draft agreement and will do so in its sole discretion. Significant material proposed changes to the draft agreement may impact the evaluation of the Respondent's proposal. ONTC will not accept any material changes to the clauses in the draft agreement 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 039

Title: Demolition of Various ONTC Buildings

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, August 12, 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 site. PROPOSALS SUBMITTED BY RESPONDENTS THAT FAILED TO ATTEND THE RESPONDENTS' MEETING WILL BE DECLARED NON-COMPLIANT AND WILL BE REJECTED.

Date of Meeting: Tuesday, August 13, 2024

Time of Meeting: 10:30 a.m.

Location: via Teams Conference Call

COMPANY NAME: _____

CONTACT NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

NUMBER OF PERSONS 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
---	---------------------------------

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)

Contractor Safety Pre-Qualification Form

1. Company Identification:

Company Name:	_____	Telephone:	_____	ONTC Use
Mailing Address:	_____	Fax:	_____	
	_____	E-mail:	_____	

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: _____

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	
j) Heavy Construction Equipment (excavators, backhoes, bulldozers, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
k) Excavation and Trenching	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
l) Housekeeping	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
m) Accident / Incident Reporting and Investigation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
n) Hazard / Unsafe Condition Identification, Reporting and Communication	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
o) Workplace Hazardous Materials information System (WHMIS)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
p) Emergency Action Plan / Evacuation Plan	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
q) Spill Response / Reporting	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
r) Respiratory Protection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
s) Designated Substances Management	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
t) Waste Staging / Disposal	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
u) Traffic Control	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
v) Hearing Conservation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
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	
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 safely perform their tasks</i>)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
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	
16. Do you have First Aid kits available to your staff?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
17. Does your company use a formalized Health and Safety Plan for conducting large projects?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
18. Does the company conduct pre-placement medical examinations?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
19. Is task-adequate PPE provided to workers?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
20. Are employees trained in PPE care, use and maintenance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
21. Do you have a corrective actions process for addressing individual health and safety performance deficiencies	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

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</u> <u>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 milestones, including but not limited to

- Mobilization
- Demolition
- Abatement work
- Mechanical, Electrical and other removals
- Site Work
- Anticipated Completion Date

Request for Proposal Close	Monday, August 26, 2024
Mobilization to Site	September 2024
Completion of the Work	December 30, 2024

Do you agree to complete the Work by December 30, 2024?

Respondent confirms that they will complete the Work by December 30, 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.

- Describe how the work will be accomplished. What measures will be employed to protect neighboring structures from damage?
- Narrative description of the demolition
- Demolition Plan and Site Requirements
- Identify Dump Sites

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 11
SCHEDULE OF PROGRESS PAYMENTS

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 12
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). Respondents shall include the resume of the site supervisor demonstrating specific demolition experience.

Name

Position

Experience

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 13
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 13, 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. The Respondent shall describe their experience with the climatic and environmental requirements in Northern Ontario.
4. 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.

ONTC will consider all information submitted in the Respondent's Proposal when evaluating the Respondent's experience.

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 14
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
DRAFT AGREEMENT

This Agreement made on XX,

BETWEEN:

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

(“**ONTC**”)

and

XXX

(the “**Contractor**”)

Contract Documents

1. The following documents are included in this Agreement and form the Contract Documents:
 - (a) Agreement;
 - (b) Schedule A – Scope of Work
 - (c) Schedule B – Contractor’s Submission;
 - (d) Schedule C – Project-Specific Requirements for a Proper Invoice; and,
 - (e) Special Provisions, if any. (“Contract Documents”)

Precedence of Contract Documents

2. If there is any conflict or inconsistency between the Contract Documents, unless otherwise provided, such documents will prevail in the following order, but only to the extent necessary to resolve the conflict or inconsistency:
 - (a) Special Provisions, if any;
 - (b) Agreement;
 - (c) Schedule A – Scope of Work;
 - (d) Schedule C – Project-Specific Requirements for a Proper Invoice; and
 - (e) Schedule B – Contractor’s Submission.

The Work

3. The Contractor shall perform the Work required by the Contract Documents for the demolition and removal of the existing structure at Street, City, ON and any remediation or reclamation required in connection with the demolition and removal to return the land to a clean and buildable state unless otherwise stated in the Description of the Work,

including the excavation and disposal of materials located on or under the land and removal of hazardous materials located at or within the structure (the “**Project**”).

4. The Contractor shall perform the Work in accordance with the requirements of the Contract Documents and the Standard of Care.
5. ONTC shall have the right to amend the Work to have some of the Work completed by its own forces.

Contract Price

6. The “**Contract Price**” is \$XXX plus applicable taxes, more particularly described in Schedule B, subject to adjustment in accordance with the Change Order process in the Contract Documents. The Contract Price includes the cost to salvage the materials required to be salvaged for ONTC as set out in Schedule A and any anticipated revenue to the Contractor from the disposition of the Contractor’s salvaged materials.

Contract Time

7. Subject to adjustment(s) approved in accordance with the Contract Documents, the Contractor shall commence the Work on the XX day of XX, 20XX and shall achieve Substantial Performance of the Work on or before the XX day of XX, 20XX (the “**Contract Time**”).

DEFINITIONS AND INTERPRETATION

8. In the Contract Documents,

“**Acceptance**” and “**Accepted**” means ONTC 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 ONTC that the Submittal does not contain error 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.

“**Adjudication**” means construction dispute interim adjudication as defined under the *Construction Act*.

“**Agreement**” means this agreement and all attached Schedules.

“**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” means the federal, provincial or municipal entity that is responsible for enforcing codes, standards and regulations relating to building construction or 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.

“Change Directive” means a written instruction prepared by the ONTC Representative and signed by ONTC directing the Contractor to proceed with a change in the Work within the general scope of the Contract Documents prior to ONTC and the Contractor agreeing upon adjustments, if any, in the Contract Price and/or the Contract Time.

“Change Order” means a written amendment to the Contract Documents prepared by the ONTC Representative and signed by ONTC and the Contractor stating their agreement on:

- (a) a change in the Work;
- (b) the method of adjustment or the amount of the adjustment in the Contract Price, if any; and,
- (c) the extent of the adjustment in the Contract Time, if any.

“Confidential Information” includes information, whether oral, written, visual, electronic, or in any other form, relating in any way to this Agreement, which is identified as confidential or that would reasonably be considered as being confidential. Confidential Information does not include any portions of the Confidential Information that (a) at the time of disclosure was in the public domain; (b) after disclosure hereunder, is published or otherwise becomes part of the public domain through no fault of the Contractor; or (c) is received from an independent third party who had obtained the Confidential Information lawfully and was under no obligation of secrecy or duty of confidentiality owed to ONTC.

“Conflict of Interest” means any actual or potential conflict of interest including, but not limited to:

- (a) Situations or circumstances that could compromise the ability of the Contractor to perform its obligations under the Contract Documents; and,
- (b) The offer or giving of a benefit of any kind by or on behalf of the Contractor to anyone employed by or otherwise connected with ONTC.

“Contaminated Soil Materials” means soil containing Environmental Contaminants that is required to be removed by the Contractor as part of the Work.

“Contractor Parties” means the directors, officers, employees, agents, consultants, invitees, Subcontractors and representatives of the Contractor.

“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 Agreement. For certainty, Parts I.1 (Prompt Payment) and II.1 (Construction Dispute Interim Adjudication) of the *Construction Act* apply to this Agreement.

“Construction Documents” means the Drawings, Specifications, and other documents prepared by or on behalf of the Contractor, based on and in compliance with the Contract Documents.

“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.

“Construction Schedule” means the schedule for the performance of the Work provided by the Contractor pursuant to section 14, including any amendments to the Construction Schedule made pursuant to the Contract Documents.

“Defect” or **“Defective Work”** means failure to perform or deliver any of the Work in conformity with the quantity, quality, specifications and/or other requirements set out in the Contract Documents.

“Designated Substances” means the substances identified in the Designated Substances Survey report relating to the Work Site prepared for ONTC by XXX dated XXX, 20XX.

“Drawings” means the detailed engineering designs, drawings, diagrams, illustrations, schedules, technical brochures and other data to be used by the Contractor in the performance of the Work and includes Shop Drawings and the waste management plan.

“Environmental Laws” means all applicable federal, provincial, territorial, municipal and local laws, common laws and principles thereof, and orders, directives and decisions rendered or issued by an Authority Having Jurisdiction relating to Environmental Contaminants or the protection of human health, natural resources or the environment;

“Environmental Contaminants” means any substance, material or waste defined, regulated, listed or prohibited by Environmental Laws.

“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, adverse weather conditions which are materially more adverse than could reasonably be expected, 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 government priorities of any Authority Having Jurisdiction; provided such event is not caused by the affected party's negligence or failure to exercise reasonable diligence. 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 Rights” 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.

“Materials” means material, machinery, equipment, and fixtures forming the Work, but does not include Construction Equipment.

“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.

“ONTC Parties” means ONTC and its directors, officers, employees, agents, consultants, contractors and subcontractors.

“ONTC Representative” means the person or entity appointed or engaged by ONTC to manage the Work on behalf of ONTC.

“Project” means the total construction contemplated by ONTC, as described in section 3 and elsewhere in the Contract Documents, of which the Work may be the whole of the Project or a part.

“Proper Invoice” means a “proper invoice” as that term is defined in Section 6.1 of the *Construction Act*, with the minimum requirements set out in Schedule C.

“Restoration Work” means the work described in the Specifications to be completed following demolition of the building and removal of the materials resulting from the demolition.

“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 Agreement.

“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 Agreement.

“Specifications” means that portion of the Contract Documents, wherever located and whenever issued, consisting of the written requirements and standards for the Materials, systems, workmanship, quality, and the services necessary for the performance of the Work.

“Standard of Care” has the meaning set out in section 10.

“Subcontractor” means a person who contracts with the Contractor or another Subcontractor for the performance of any part of the Contractor’s obligations under the Contract Documents and includes suppliers of the Contractor.

“Submittal(s)” means all documentation prepared by the Contractor and submitted to the ONTC for review and Acceptance in accordance with the Contract Documents.

“Substantial Performance of the Work” or **“Substantial Performance”** means when the requirements of section 2(1) and, if applicable, section 2(2) of the *Construction Act* are certified as achieved or deemed achieved, in accordance with the *Construction Act*.

“Supplemental Instruction” means an instruction, not involving an 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 ONTC Representative to supplement the Contract Documents as required for the performance of the Work.

“Taxes” means any and all taxes, levies, import duties, customs duties, stamp duties, fees, withholdings, assessments, deductions or charges whatsoever, imposed, assessed, levied or collected by any governmental authority, together with interest, fines and penalties, including occupational, excise, unemployment, ownership, sales, gross receipts, income taxes, payroll taxes, employer contributions (both statutory and otherwise) and workers’ compensation payments and contributions, but does not include Harmonized Sales Tax (HST).

“Work” means everything that the Contractor is required to supply or perform in order to carry out the terms and conditions of the Contract Documents and includes any work or services not expressly in the Contract Documents, but which is, nevertheless, necessary for the proper completion of the Work.

“Work Site” means the designated site(s) or location(s) of the Work identified in the Contract Documents, including without limitation the location specified in section 3.

“Working Day” means any day except a Saturday, Sunday or statutory holiday, or statutory vacation day that is observed by the construction industry in Ontario, or such other day(s) designated as working days in the Contract Documents.

“WSIA” means the *Workplace Safety and Insurance Act, 1997*, S.O. 1997, c. 16, Sched. A.

9. **Trade Terms.** Words and abbreviations that have well known technical or trade meanings are used in the Agreement in accordance with such recognized meanings.

CONTRACTOR’S OBLIGATIONS

Standard of Care

10. The Contractor shall:

- (a) Perform the Work in accordance with all applicable laws, the Contract Documents, all applicable professional standards, and in an efficient and workmanlike manner, using only qualified, skillful and careful workers;
- (b) In performing the Work and its obligations under the Agreement, exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor performing work of a similar nature to the Work;
- (c) Ensure any Construction Equipment used by Contractor Parties at the Work Site will be in safe working condition, will comply with all laws applicable to such equipment and will be operated by suitably qualified and competent personnel; and
- (d) While being on ONTC's property, comply with ONTC's policies, including its Fit for Duty policy,

(the "**Standard of Care**").

11. The Contractor acknowledges and agrees that the performance of the Contractor's obligations, duties and responsibilities under this Agreement shall be judged against the Standard of Care. The Contractor shall exercise the Standard of Care when recommending the use of Materials, personnel or procedures to ONTC.
12. Where the Work does not comply with the specified Standard of Care, the deficiency in the Work shall be corrected as directed by the ONTC Representative. Subsequent testing to ensure that the Standard of Care has been attained (including re-testing by ONTC), shall be carried out at the Contractor's expense.

Vendor Performance Evaluation

13. ONTC has a Vendor Performance Policy which requires ONTC to complete an evaluation of the Contractor's performance of its obligations under the Contract Documents. The performance evaluation of the Contractor's performance of its obligations under the Contract Documents 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>. The Contractor shall participate in the evaluation process under the Vendor Performance Policy.

Anti-Corruption, Forced Labour and Sanctions

14. The Contractor warrants that no bribe, gift or other inducement has been paid, promised or offered to any official or employee of ONTC, the Ministry of Transportation, the Government of Ontario or any other government official relating to ONTC entering into this Agreement with the Contractor.

15. The Contractor warrants that 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 Agreement, the Contractor shall report the incident to ONTC immediately.
16. The Contractor warrants that 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. The Contractor warrants that 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.
17. 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 Agreement and will require such compliance by its first-tier subcontractors. ONTC relies on such undertaking from the Contractor to enter into this Contract, and any breach of such undertaking shall entitle ONTC to terminate this Agreement for default and to recover damages from the Contractor, including excess re-procurement costs.

Communications

18. ONTC or the Government of Ontario will lead and make any announcements relating to this 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 Agreement or the Work unless prior written consent is given by ONTC. 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 Agreement or the Work, the Contractor shall provide no comment and shall immediately notify ONTC. The Contractor shall immediately notify the Owner if it becomes aware of any publication or announcement relating to the Agreement or the Work

Time of the Essence

19. The parties agree that time is of the essence in this agreement and that the Contractor must achieve Substantial Performance within the Contract Time, which deadline may only be amended by a fully executed Change Order, if any.

20. The Contractor acknowledges and agrees that if the Contractor fails to achieve Substantial Performance of the Work within the Contract Time for reasons other than Force Majeure or if the Work contains Defects that delay Substantial Performance, the Contractor shall shall pay to ONTC the costs incurred by ONTC as a result of the delay, including, without limitation, consequential, special, incidental, and indirect damages, costs and other expenses incurred or suffered by ONTC.

Contractor's Responsibilities

21. The Contractor shall be solely responsible for the construction means, methods, techniques, sequences, and procedures with respect to the Work and shall direct and supervise the Work so as to ensure conformity with the Contract Documents.
22. The Contractor is solely responsible for the quality of the Work and shall undertake any quality control activities specified in the Contract Documents or, if none are specified, as may be reasonably required to ensure such quality.
23. The Contractor shall provide access to the Work that the Owner may reasonably require to verify the progress of the Work and their conformity to the requirements of the Contract Documents.
24. The Contractor shall furnish promptly to ONTC, on request, a copy of certificates, test reports and inspection reports relating to the Work.
25. The Contractor shall submit the proposed Construction Documents to ONTC to review in orderly sequence and sufficiently in advance so as to cause no delay. ONTC and the Contractor shall jointly prepare a schedule of the dates for submission and return of proposed Construction Documents. At a minimum, ONTC shall have not less than 10 days after each submission to review the Construction Documents and either approve or reject the Construction Documents. Any deficiencies in the Construction Documents shall be remedied by the Contractor promptly after notification by ONTC of the deficiency.
26. At the time of submission the Contractor shall advise ONTC in writing of any significant deviations in the proposed Construction Documents from the requirements of the Contract Documents. ONTC may or may not accept such deviations. Accepted deviations will be recorded in a Change Order.
27. The Contractor shall:
 - (a) Promptly after signing the Agreement, prepare and submit to ONTC a Work 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 that the Work will be performed in conformity with the schedule and a waste management plan; and
 - (b) Monitor the progress of the Work relative to the schedule and update the schedule on a monthly basis or as stipulated by the Contract Documents.

28. The Contractor shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the place of the Work while work is being performed. The appointed representative shall not be changed except for valid reason.

EXECUTION OF THE WORK

29. The Contractor is solely responsible for the execution of the Work and shall perform the Work in accordance with the requirements of the Contract Documents. In particular, the Work to be performed by the Contractor includes:
- (a) Scheduling the Work in accordance with the Contract Time and monitoring and reporting on the progress of the Work relative to the Contract Time and ensuring that each critical path activity or milestone is completed by the applicable dates in the Construction Schedule and in accordance with the Contract Time;
 - (b) Coordinating and taking responsibility for the scheduling and supervising of Subcontractors;
 - (c) Before the Work is commenced, ensuring that the Drawings, demolition plan, waste management plan and methods of working proposed or specified by the Contractor are provided to the ONTC Representative; and,
 - (d) Consulting with the ONTC Representative throughout the performance of the Work.
30. For greater certainty, the Contractor shall be the “importer of record” and the “exporter of record” for all Materials and amaterials arising from the demolition and shall be responsible for all Taxes including import duties on all Materials, equipment, parts or any other items forming part of the Work.

Construction Schedule

31. The Contractor shall prepare, and update as required or requested, a schedule, including identification of the critical path of the Work and the schedule of operations, indicating the proposed methods of demolition and sequence of work and the times the Contractor proposes to complete the various items of work (*i.e.* milestones) within the Contract Time (the “**Schedule**”). The Schedule, if not submitted with the Contractor’s Submission, shall be submitted to the ONTC Representative within 10 Working Days from the date of the contract award.
32. The Contractor shall, during performance of the Work and in accordance with the controls and reporting requirements in the Contract Documents, provide for the ONTC Representative’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. These updated Construction Schedules shall be provided at least every 30 days. If the Schedule is affected by approved Changes, the Contractor shall submit an updated Schedule, if requested by the ONTC Representative, within 7 Working Days of the request. This updated Schedule shall show how the Contractor proposes to perform the balance of the

Work and complete the Work within the Contract Time. ONTC may, at its sole discretion, not issue an order to commence work until the Construction Schedule has been received and Accepted.

Schedule Slippage

33. If at any time it should reasonably appear to ONTC that the actual progress of the Work is behind schedule or is likely to become behind schedule and notice of such opinion is given to the Contractor or the Contractor has noticed slippage in the schedule, then the Contractor shall take appropriate steps to cause the actual progress of the Work to conform to the Schedule and shall provide ONTC with an updated Schedule showing how the Contractor proposes to perform the balance of the Work and complete the Work within the Contract Time.

Permits, Licenses, Approvals

34. ONTC has Crown immunity from the *Building Code Act* and the *Planning Act* and will not be obtaining building permits, demolition permits or development approvals for the Work unless otherwise stated in the Contract Documents. The Contractor shall, at the Contractor's expense, obtain prior to commencement of the Work and maintain all permits, licenses, approvals, consents and other forms of authorizations necessary for the performance the Work and required in accordance with applicable laws.

Labour and Materials

35. The Contractor shall provide and pay for labour, Materials, tools and Construction Equipment, transportation and other services necessary for the performance of the Work in accordance with the Contract Documents. The Contractor shall not be entitled to a change in the Contract Price due to any increase in the cost of labour, Materials, tools, Construction Equipment, utilities, transportation, or other facilities or services, whether or not the Contract Time is extended. For clarity, the Contractor shall be responsible for the removal and disposal of all Designated Substances from the Work Site, which work is included in the Contract Price.

Documents at the Work Site

36. The Contractor shall keep one copy of the current Contract Documents and Submittals, including Supplemental Instructions, contemplated Change Orders, Change Orders, Change Directives, and reports and records of meetings at the Work Site in good order and available to ONTC and the ONTC Representative.

Effect of Review and Approval

37. Notwithstanding any other provision of the Agreement, no direction, request, Acceptance or approval by ONTC, or anyone on its behalf, nor any failure of ONTC to do so, will lessen or relieve the Contractor from performing and fulfilling its obligations or satisfying any liability under the Agreement or be construed as an acceptance of all or part of the Work or as a Change Order.

PAYMENT AND COMPLETION OF THE WORK

Contract Price

38. ONTC shall, subject to any right of set-off or withholding by ONTC, pay the Contractor the Contract Price in accordance with the terms of the Contract Documents for the performance of the Work, subject to any Change Orders authorized by ONTC and the Contractor in writing. The Contract Price shall constitute the Contractor's sole and exclusive consideration for performance of the Work, and the Contractor shall not be entitled to receive any other monies or other consideration for the performance of the Work.

Applications for Payment

39. The Contractor shall submit an application for payment on account of the Contract Price plus HST by email to pay.inv@ontarionorthland.ca and to the ONTC Representative upon completion of each of the milestones set out in the Schedule with all necessary backup and support requirements set out in the Contract Documents or reasonably identified by ONTC. All applications for payment must be sent to the ONTC Representative within 30 days after completion of the applicable milestone unless otherwise agreed by the Parties. If the Contractor fails to deliver its application for payment, at the interval prescribed in this section or agreed to by the Parties, subject to written approval by the ONTC Representative, the Contractor shall not be entitled to submit an application for payment until the next prescribed interval.
40. The Contractor shall submit to the ONTC Representative, at least 30 calendar days before delivering its first application for payment, a schedule of values for the parts of the Work, aggregating the total amount of the Contract Price, in a form acceptable to ONTC, to facilitate evaluation of each application for payment. When accepted by the ONTC Representative, the schedule of values shall be used as the basis for evaluating the Contractor's applications for payment.
41. Each application for payment delivered by the Contractor in accordance with sections 39 and 40 shall include all of the requirements for a Proper Invoice as set out in Schedule C.
42. ONTC may, prior to the time it is required to issue payment in respect of an application for payment, request any additional information or backup from the Contractor in respect of the application for payment.
43. The Contractor shall not claim for or be entitled to payment for the correction or re-performance of any Defective Work, including labour and time of any Contractor Parties for such correction or re-performance.
44. Notwithstanding any other provision of this Agreement, the Contractor shall not deliver an application for payment, for consideration as a Proper Invoice by ONTC, during the Restricted Period (Proper Invoice).

Progress Payments

45. After receipt by the ONTC Representative of an application for payment submitted by the Contractor in accordance with sections 39 to 44:
- (a) The ONTC Representative will assess whether all the criteria for a Proper Invoice are satisfied and, if not, the ONTC Representative will return the application for payment to the Contractor with the reasons why the application for payment is not a Proper Invoice,
 - (b) ONTC reserves the right, in its sole, absolute, and unfettered discretion to permit the Contractor to correct an error or minor irregularity in an application for payment submitted by the Contractor, and to permit the Contractor to re-submit the application for payment before the next interval prescribed by section 39; however, ONTC shall be under no obligation to exercise this right and the date of resubmission of the application for payment shall be deemed to be the date of receipt by ONTC of the Proper Invoice, provided that the requirements of the Proper Invoice are then satisfied;
 - (c) Within 14 calendar days of receipt of a Proper Invoice (or on the next Working Day if the 14th day is not a Working Day), in the event that ONTC disputes the amount claimed as payable in the Proper Invoice, ONTC shall deliver to the Contractor an executed Notice of Non-Payment (Form 1.1); and
 - (d) ONTC shall make payment to the Contractor 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.
46. Where ONTC has delivered a Notice of Non-Payment, as specified under section 45(c), ONTC 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, ONTC and the Contractor cannot resolve the dispute, either party may issue a notice of Adjudication pursuant to the *Construction Act*, in which case ONTC and the Contractor will agree to submit the dispute to Adjudication in accordance with the Dispute Resolutions provisions of this Agreement.
47. The amounts disputed and described under the Notice of Non-Payment shall be held by ONTC until all disputed amounts of the relevant Proper Invoice have been resolved pursuant to the Dispute Resolution provisions of this Agreement. Any portion of the Proper Invoice which is not the subject of the Notice of Non-Payment shall be payable within the period set out in section 53(d).
48. Without limitation, ONTC shall be entitled to deduct from or, set off against, any payment of the Contract Price and any other amounts payable by ONTC to the Contractor under the Contract Documents:
- (a) Any amount expended by ONTC in exercising ONTC's rights under the Contract Documents to perform any of the Contractor's obligations that the Contractor has failed to perform;

- (b) Any damages, costs or expenses (including, without limitation, reasonable legal fees and expenses) incurred by ONTC as a result of the failure of the Contractor to perform any of its obligations under the Contract Documents; and
 - (c) Any other amount owing from the Contractor to ONTC under the Contract Documents.
49. The Contractor represents, warrants, and covenants to ONTC 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 section will be made available to ONTC within 5 Working Days following receipt by the Contractor of a written notice making such request.

Substantial Performance

50. When the Contractor is of the opinion that the Work is substantially performed, the Contractor shall provide ONTC with written notice of the date on which the Contractor believes that Substantial Performance of the Work was achieved. The notice shall include a list of items to be completed or corrected. Failure to include an item on the list does not alter the responsibility of the Contractor to complete the Work.
51. The ONTC Representative and the Contractor shall jointly inspect the Work Site at a mutually convenient time to verify that Substantial Performance of the Work has been achieved. If, following the inspection, in the opinion of the ONTC Representative, Substantial Performance of the Work has been achieved, the ONTC Representative shall provide a certificate in the prescribed form confirming that Substantial Performance of the Work has been achieved and the date of such achievement. If, following the inspection, the ONTC Representative is of the opinion that Substantial Performance of the Work has not been achieved, the ONTC Representative shall, within 10 Working Days of the completion of the inspection, provide the Contractor with a list of items that must be completed by the Contractor for Substantial Performance of the Work to be achieved.
52. The Contractor shall complete the items in the ONTC Representative's list as soon as practicable and in any event by the time designated by the ONTC Representative.
53. If ONTC takes possession and control of the Work before the Contractor completes the items on the ONTC Representative's list, the Contractor shall co-ordinate any remaining work with ONTC and perform such work in the manner and at the times required by ONTC while maintaining full continuous operation of the Work Site.
54. After the date of Substantial Performance of the Work is completed, the Contractor shall finish the Work within 30 calendar days or within such other period as agreed between the parties and subject to section 59.
55. Immediately following the issuance of a certificate of Substantial Performance of the Work, the Contractor shall publish the certificate in the manner provided in the *Construction Act*. Failing valid publication by the Contractor within 3 Working Days

following the issuance of the certificate, ONTC shall be at liberty to publish the certificate and back-charge the Contractor for its reasonable costs for doing so.

Payment of Holdback upon Substantial Performance of the Work

56. Where after thirty (30) days following the publication of the certificate of Substantial Performance of the Work, the value of the Work remaining to be complete under the Agreement, plus the estimated cost to repair any remaining deficiencies, exceeds the amount of the unpaid balance of the Contract Price (as determined by the ONTC Representative, acting reasonably), ONTC may publish a Notice of Non-Payment of holdback in accordance with the *Construction Act* (Form 6) and retain an amount from the holdback to supplement the unpaid value of the Contract Price to secure the correction of deficiencies and completion of the Work.
57. Subject to the registration of any claims for lien or delivery of any written notices of lien and subject to the requirements of the *Construction Act* with respect to the release of holdback, the holdback amount is, due and payable on the 61st calendar day following the publication of the certificate of Substantial Performance of the Work.

Final Completion

58. ONTC will consider the Work is complete when, except for any obligations of the Contractor relating to the warranty, the Work has been fully completed in accordance with the Agreement, including all Defects remedied to meet the Standard of Care and the requirements of the Contract Documents and all obligations of the Contractor to Subcontractors and anyone else related to the Work are fully satisfied.
59. When the Work has, in the opinion of the Contractor reached final completion, the Contractor shall submit an application for final payment, including the following:
 - (a) The documents described in Schedule C;
 - (b) A complete statement of accounts, including any Change Orders applicable to the Work;
 - (c) A complete statement of all money that the Contractor considers to be due from ONTC arising out of or in connection with the Work, the Contract Documents or any alleged breach of the Contract Documents, including details of how the amount claimed in the application for final payment is calculated; and,
 - (d) Confirmation that all Submittals and approvals of all Authorities Having Jurisdiction as required by the Contract Documents have been delivered to ONTC.
60. After receipt by the ONTC Representative of an application for final payment submitted by the Contractor in accordance with section 59:
 - (a) The ONTC Representative will assess whether all of the criteria for a Proper Invoice are satisfied and, if not, within 2 Working Days of receipt, the ONTC Representative will return the application for payment to the Contractor with reasons setting out why the application for final payment is not a Proper Invoice;

- (b) Within 14 calendar days of receipt of the Proper Invoice (or on the next Working Day if the 14th day is not a Working Day), if ONTC disputes the amount claimed as payable in the Proper Invoice, ONTC shall deliver to the Contractor an executed Notice of Non-Payment (Form 1.1); and
 - (c) ONTC shall make payment to the Contractor as provided in section 45, 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.
61. Where ONTC has delivered a Notice of Non-Payment, as specified under section 60(b), ONTC 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, ONTC and Contractor cannot resolve the dispute, either party may issue a notice of Adjudication in a form prescribed under the *Construction Act*. ONTC and Contractor will then submit the dispute to Adjudication in accordance with the Dispute Resolution provisions of this Agreement.
62. The amounts disputed and described under the Notice of Non-Payment shall be held by ONTC until all disputed portions of the Proper Invoice for final payment have been resolved in accordance with the Dispute Resolution provisions of this Agreement. 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 section 60(c).

Taxes

63. The Contractor shall be liable for the payment of any Taxes connected with the Work, except for taxes relating to ONTC's capital, operations or income. ONTC may deduct from or set-off against the whole or part of payments due to the Contractor any Taxes that ONTC is required to withhold or deduct by any governmental authority. Prior to payment being made to the Contractor, ONTC shall notify the Contractor of any required withholding or deduction.

Payment on Account

64. A payment made pursuant to the Agreement does not prejudice the right of either party to dispute whether the paid amount is the amount properly due and payable nor does it conclusively constitute evidence of the value of the Work or whether the Work has been executed satisfactorily.

Liens

65. The Contractor shall not permit a Subcontractor to assert any right to a construction, builder's, mechanic's or unpaid vendor's lien for unpaid work or supply of Materials (a "**lien**") or to issue a written notice of lien pursuant to the *Construction Act*.
66. The Contractor shall, at its cost, promptly discharge, release or vacate or obtain a withdrawal of any lien that is the subject of a claim for lien or a written notice of lien relating

to the Work Site or any of ONTC's property or buildings by a Subcontractor. If such lien is not discharged or withdrawn within 7 calendar days of the service of the written notice of lien or of the registration of the claim for lien, then without prejudice to any other rights or remedies it may have, ONTC may take whatever steps it deems necessary and appropriate to discharge or obtain a withdrawal of the lien, including payment of any amount owing or claimed thereunder, and seek immediate recovery from the Contractor for the amount of any such payment and any associated costs, including legal costs, all of which shall be payable on demand.

67. Without limiting any of the foregoing, the Contractor shall satisfy all judgments and pay all costs resulting from any construction liens or any actions brought in connection with any liens, or in connection with any other claim or lawsuit brought against ONTC by any person that provided services or Materials to the Project which constituted part of the Work, and the Contractor shall indemnify ONTC for any and all costs (including, without limitation, legal fees on a solicitor and client basis) ONTC may incur in connection with such claims or actions.
68. In the event that a Subcontractor registers a claim for lien with respect to all or part of the Work Site or delivers a claim for lien or a written notice of lien to ONTC, ONTC shall have the right to withhold, in addition to the statutory holdback, the full amount of the claim for lien plus either: (a) \$250,000 if the claim for lien is in excess of \$1,000,000 or (b) 25% of the value of the claim for lien and to bring a motion to vacate the claim for lien and any associated certificate of action in respect of that claim for lien, in accordance with Section 44 of the *Construction Act*, by paying into court as security the amount withheld.
69. Section 20(1) of the *Construction Act* does not apply to this Agreement and no general lien arises under or in respect of the Work and liens shall arise and expire on a per property basis.

Withholding from Payment

70. All or part of any payment under an application for payment may be withheld by ONTC or set-off against the payments owing to the Contractor for:
 - (a) All amounts due from the Contractor to ONTC (including under any indemnity in this Agreement);
 - (b) Any amount that ONTC is required to withhold or deduct by the *Construction Act* or applicable laws;
 - (c) The amount of any liens for which ONTC has received a written notice of lien or a copy of a claim for lien relating to the Work; or,
 - (d) Defective Work including non-compliance with health and safety rules and policies (until it has been re-performed or otherwise remedied to ONTC's satisfaction at the Contractor's sole expense).

71. 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 ONTC Representative shall not be withheld or delayed by ONTC on account thereof, but ONTC may withhold, until the remaining portion of the Work is finished, only such an amount that the ONTC Representative determines is sufficient and reasonable to cover the cost of performing such remaining work.
72. 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 Documents, then ONTC may, without limiting the remedies available to it under this Agreement and subject to ONTC'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 ONTC Representative.
73. In addition to any rights ONTC has pursuant to the *Construction Act* and subject to ONTC's requirement to issue a Notice of Non-Payment under the *Construction Act*, if a lien is registered or an action commenced against ONTC, ONTC 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 ONTC's 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 ONTC.

CONTRACT ADMINISTRATION

The ONTC Representative

74. ONTC shall appoint, and may replace, the ONTC Representative for the Project by written notice to the Contractor. The ONTC Representative will have the authority to act on behalf of ONTC for all matters arising under the Contract.
75. The ONTC Representative will visit the Work Site at intervals appropriate to the progress of the Work 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.
76. Based on the ONTC Representative's observations and evaluation of the Contractor's applications for payment, within 7 calendar days of receipt of the Contractor's Proper Invoice, the ONTC Representative will determine the amounts owing to the Contractor under the Contract Documents and will recommend the applications for payment. If ONTC determines that the amount payable to the Contractor differs from the amount stated in a Proper Invoice, ONTC shall prepare the applicable Notice of Non-Payment for the amount in dispute.
77. If there is a dispute between ONTC 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 the Dispute Resolution provisions in this Agreement.

78. The ONTC Representative will have the authority to reject any portion of the Work (including any Materials) which in the ONTC Representative's opinion does not conform to the requirements of the Contract Documents. Whenever the ONTC Representative considers it necessary or advisable, the ONTC Representative will have authority to require inspection or testing of Work, whether or not such work is fabricated, installed or completed.

Review and Inspection of the Work

79. ONTC 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 ONTC and the inspection of the Work by authorized agencies. If parts of the Work are in preparation at locations other than the Work Site, ONTC shall be given access to such Work whenever it is in progress upon reasonable notice and at its cost.
80. If any part of the Work is designated for tests, inspections or approvals in the Contract Documents or by the applicable laws, the Contractor shall give ONTC reasonable notification of when the part of the Work will be ready for review and inspection. The Contractor shall arrange for and shall give ONTC reasonable notification of the date and time of inspections by other authorities.
81. The Contractor shall furnish promptly to ONTC copies of any certificates and inspection reports relating to the Work.
82. The Contractor shall provide to ONTC the test results from an accredited laboratory for samples taken by a qualified professional of the fill to be placed in the excavation resulting from the demolition. The Contractor shall not place or cover the fill until ONTC has approved the fill.
83. ONTC 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 portion or portions of the Work are 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 such Work is in accordance with the requirements of the Contract Documents, ONTC shall pay the cost of examination.
84. 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 required in the Contract Documents or by applicable laws to be performed by the Contractor.

Defective Work

85. The Contractor shall promptly correct Defective Work that has been rejected by ONTC as failing to conform to the Contract Documents whether or not the Defective Work has been incorporated in the Work and whether or not the Defect is the result of poor design, poor

workmanship, use of defective Materials or damage through carelessness or other act or omission of the Contractor.

86. If in the opinion of ONTC it is not expedient to correct Defective Work or Work not performed as provided in the Contract Documents, ONTC 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 ONTC and the Contractor do not agree on the difference in value, the matter shall be handled as a dispute in accordance with the Dispute Resolution provisions of this Agreement.

EMPLOYEES AND SUBCONTRACTORS

Contractor Parties

87. The Contractor shall assign to the Work only competent, appropriately qualified, experienced and skilled Contractor Parties to perform the Work and ensure that the Work is performed under the supervision of appropriately qualified and experienced personnel.
88. All parts of the Work required by applicable laws to be performed by licensed or registered professional engineers or architects shall be performed by licensed or registered professional engineers and architects.
89. The Contractor shall be solely liable to pay all salaries, wages, overtime, bonuses, allowances, profit sharing, pensions, and other remuneration of the Contractor Parties, including payment of costs related to employee benefits, and for the deduction and remittance of all applicable employment-related taxes, premiums, dues and other burdens to the appropriate governmental authorities. The Contractor shall not be entitled to claim, nor shall ONTC be obliged to pay or reimburse the Contractor, for any monies whatsoever in respect of or in connection with any such payments, save and except where expressly included in the Contract Price.
90. The Contractor shall ensure the Contractor Parties, while working on ONTC's property, are aware of and comply with applicable laws, ONTC's policies, including its Fit for Duty Policy, and the Ontario Northland Operating Manual, including the Current Summary Bulletin, the current Ontario Northland Timetable, C.R.O.R. 2022, Infrastructure Special Instructions, Dangerous Goods and Ontario Northland General Operating Instructions, as applicable.

Subcontracting

91. The Contractor shall not enter into a subcontract for any part of the Work except as disclosed in any quote or response of the Contractor to an ONTC procurement document or, in any other case, without the prior written approval of ONTC. The Contractor shall provide to ONTC as part of the Contractor's request for approval, a description of that part of the Work to be subcontracted and the name and address of the proposed Subcontractor, and such other information as ONTC may request.

92. The Contractor shall not change Subcontractors without the prior written approval of ONTC, which approval will not be unreasonably withheld.
93. The Contractor shall ensure that any subcontract with the Subcontractor:
- (a) Enables the Contractor to terminate the subcontract for convenience and without cause and without creating any liability to ONTC except as provided in section 166;
 - (b) Contains a term that ensures that ONTC obtains the benefit of any warranties to be provided by the Subcontractor to the Contractor;
 - (c) Incorporates the relevant terms and conditions of the Contract Documents into the subcontract, including the requirement for insurance, with the Contractor and ONTC as a named insured; and
 - (d) Requires the Subcontractor to perform their Work in accordance with the Contract Documents.
94. The Contractor shall be responsible to ONTC for the performance of all Subcontractors' Work. The Contractor is responsible for the acts, omissions and defaults of the Subcontractor and the employees, consultants, representatives and agents of the Subcontractor as if they were acts, omissions or defaults of the Contractor.
95. Nothing in the Contract Documents creates any contractual relationship between ONTC and any Subcontractor, except to the extent that Subcontractor warranties shall be directly enforceable by ONTC.

CHANGES IN THE WORK

96. ONTC may at any time make any change in, addition to, or deletion from the Work or the Contract Time by issuing a Change Order or Change Directive.
97. The Contractor shall not perform a change in the Work without a Change Order authorized by both parties or a Change Directive. 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 the provisions of this Part. 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 ONTC 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 Agreement or a claim for any extension of the Contract Time.
98. When a change in the work is proposed or requested, the Contractor shall present to ONTC for its acceptance a description of the change in the work and the Contractor's claim for an adjustment in the Contract Price and/or Contract Time, supported by appropriate documentation, all in a form acceptable to ONTC. If approved by ONTC, a Change Order shall be issued to the Contractor, amending the Contract Price and/or Contract Time, as appropriate.

99. If ONTC requires the Contractor to proceed with a change prior to ONTC and the Contractor agreeing on a Change Order, ONTC shall issue a Change Directive to the Contractor authorizing the change and the Contractor shall proceed with implementation and performance of the change. If at any time after the commencement of the change directed by a Change Directive, ONTC and the Contractor reach agreement with respect to the change, this agreement shall be recorded in a Change Order signed by both the Contractor and ONTC and such Change Order shall supersede the Change Directive.
100. If ONTC and the Contractor do not agree on the proposed adjustment in the Contract Price and/or the Contract Time attributable to the change in the Work, or the method of determining it, the adjustment shall be referred to the dispute resolution process for determination.
101. If, subsequent to the time of deadline for submission of responses for the procurement, changes are made to applicable laws, ordinances, rules, regulations or codes of authorities having jurisdiction, which changes were not, or could not have reasonably been known to ONTC or the Contractor, as applicable, at the time of the deadline for submission of responses to the procurement and which changes did not arise as a result of a public emergency or other Force Majeure event, which affect the cost of the Work, either party may submit a claim for a change in the Contract Price.

Delay

102. If the Contractor is delayed in the performance of the Work by an act or omission of ONTC contrary to the provisions of the Contract Documents, then the Contract Time shall be extended for such reasonable time as ONTC determines. The Contractor shall be reimbursed by ONTC for the reasonable direct costs directly flowing from the delay but excluding any indirect, consequential or special damages.
103. If the Contractor is delayed in the performance of the Work by a stop work order issued by a court or other public authority 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 ONTC or ONTC's other contractor(s) and relating to the Work or the Work Site 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 ONTC determines in consultation with the Contractor. The Contractor shall be reimbursed by ONTC for the reasonable direct costs directly flowing from the delay but excluding any indirect, consequential, or special damages.
104. If the performance of the Work or the performance of any other obligation(s) of a party to this Agreement is delayed by Force Majeure, then the Contract Time shall be extended for such reasonable time as ONTC 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 ONTC 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, ONTC 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.

105. Notwithstanding the foregoing, ONTC 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 Change Directive provisions of this Agreement. If the Contractor fails within the time period specified in the Change Directive to take such action, then ONTC may, at its sole and absolute discretion and after it has given written notice 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.
106. If the Contractor gives notice of a Force Majeure and the non-performance of any obligation affected by such Force Majeure continues for a period longer than 30 days, ONTC may terminate the Agreement by notice in writing to the Contractor. ONTC shall pay the Contractor for the Work performed to the date of termination.
107. No extension of the Contract Time will be approved unless the Contractor notifies ONTC in writing within 3 Working Days of becoming aware of (or when it ought reasonably to have been aware of) or being notified of any potential delay contemplated in sections 102, 103, or 104. For the written notice to be valid under this section it must include specific details about:
 - (a) The cause of the delay;
 - (b) The likely impact the delay will have on the Contract Time and details of the extension of time being requested;
 - (c) The likely effect the delay will have on payment; and
 - (d) 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.
108. If the Contractor is delayed in the performance of the Work and such delay is for a cause within the Contractor's control, or due to the replacement of a Contractor Party, the Contractor shall pay to ONTC the per diem rate for liquidated damages specified in the Contract Documents for each day of delay. If the per diem rate for liquidated damages is not specified in the Contract Documents, the Contractor shall pay to ONTC the direct and indirect costs incurred by ONTC as a result of the delay.

WORK SITE

Access to Work Site

- 109.** ONTC shall give the Contractor non-exclusive access to the Work Site to enable the Contractor to carry out its obligations under the Contract Documents, subject to the restrictions set out in the Contract Documents.

Concealed or Unknown Conditions

110. The Contractor represents to ONTC that, prior to submitting its proposal in the response to the procurement for the Project, it had the opportunity to carefully investigate the Work Site and examined all reasonably available information relevant to the risks, contingencies and other circumstances having an effect on the Work, the Construction Schedule, the Contract Time or the Contract Price, and applied to that investigation the degree of care and skill described in the Standard of Care. 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.
111. Prior to commencing the Work, the Contractor shall complete an inspection of the structures on adjacent land that may be impacted by the Work, including photographs of the existing condition of the structures. During the Work, the Contractor shall control and manage the Work to minimize the impacts on adjacent residents and businesses, including maintaining the vibration and noise caused by the Work at or below the levels described in Schedule A.
112. If ONTC or the Contractor discover conditions, including mould or Environmental Contaminants, at the Work Site which are:
- (a) Subsurface or otherwise concealed physical conditions which existed before the commencement of the Work which differ materially from those indicated in the Contract Documents; or
 - (b) Physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist for such Work,

then the party that discovers such conditions shall give notice to the other party of such conditions before they are disturbed and in no event later than 5 Working Days after first discovering the conditions. The ONTC Representative will investigate the conditions and determine if the conditions differ materially and, if so, will issue a change order for the changes in the Contract Time and/or the Contract Price to complete the Work.

113. The Contractor acknowledges that the Designated Substance Survey, if any, was provided to the Contractor by ONTC for information purposes only prior to submission of the Contractor's proposal. The Contractor shall have no remedy against the author of the reports for any damages suffered by it as a result of decisions made or actions taken by the Contractor based on the report.
114. The Contractor confirms that it has conducted its own investigation of the Work Site and satisfied itself of the exact quantities and conditions of the Environmental Contaminants

at the Work Site and included in the Contract Price the cost of all the work procedures and practices needed to comply with the applicable federal and provincial laws.

115. The Contractor acknowledges that it has received the Impact Assessment Reports, if any, for the Project that are described in the procurement 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 procurement, any adjustments required to the Contract Price based on the Impact Assessments shall be determined through a Change Order.

Waste Disposal Plan and Cleanup

116. Prior to commencing the demolition, the Contractor shall conduct a waste audit governing the waste that will be generated in the demolition project. Based on the waste audit, the Contractor shall provide to ONTC for approval a waste management plan, and a waste reduction work plan if required by Environmental Laws, for the materials resulting from the demolition that complies with all Environmental Laws and any requirements of the municipality or of a demolition permit. The Contractor confirms that the cost of disposing of all materials resulting from the demolition, including materials containing Environmental Contaminants, is included in the Contract Price.
117. The Contractor shall comply with all Environmental Laws in disposing of the materials resulting from the demolition. The Contractor shall assume all liability and responsibility for any debris and soil removed from the Work Site by the Contractor and for materials containing Environmental Contaminants during the transportation of the materials to the appropriate waste disposal site.
118. The Contractor shall submit landfill weigh bills from the local municipal landfill as proof that all waste has been disposed of at an approved landfill facility.
119. When any materials removed from the Work Site are disposed of on property not owned by the local municipality, the Contractor shall provide ONTC either:
 - (a) a waiver, in a form acceptable to ONTC, executed by the owner of the property where the materials were disposed of, releasing ONTC from any current and future obligations or liability relating to the materials and confirming acceptance of the materials; or
 - (b) a receipt from a certified waste disposal site where the materials were disposed of.
120. The Contractor shall maintain the Work Site in a safe and tidy condition and free from the accumulation of waste Materials and debris, other than that caused by ONTC or other contractors.
121. Prior to submitting notice for Substantial Performance of the Work, the Contractor shall remove waste Materials and debris, other than that resulting from the work of ONTC or

other contractors. The Contractor shall remove Materials, tools, Construction Equipment, and temporary work not required for the performance of the remaining Work.

122. Prior to submitting the application for final payment, the Contractor shall remove from the Work Site the remaining Materials, tools, Construction Equipment, Temporary Work and waste Materials and debris, except those resulting from the work of ONTC or other contractors.

Utilities

123. The Contractor shall determine the location of all underground utilities and structures indicated in the Contract Documents or that are discoverable by inspection using the degree of care and skills described in the Standard of Care.

Damage to the Work Site

124. The Contractor shall be responsible for the remediation, at its expense, of any damage, including by Environmental Contaminants or mould, to the Work Site, the Work, ONTC's property or third parties' property caused by the Contractor in the performance of the Work.

Environmental Liability

125. The Contractor shall comply with all applicable laws, including Environmental Laws, in the provision of the Work. If the Contractor fails to comply with Environmental Laws relating to the performance of the Work, the Contractor shall be solely responsible for and shall indemnify and hold harmless ONTC from, all costs, claims, fines, fees or other expenses arising from such failure to comply.
126. The Contractor shall not cause or permit any Environmental Contaminants to be located, disposed of, released, discharged or incorporated in, on or under any part of ONTC's land except as required to perform the Work. The Contractor shall remove from ONTC's land, immediately upon demand, at its cost, any Environmental Contaminants introduced thereto by the Contractor that are not required to provide the Work. If there is remediation work required on ONTC's land or adjacent land or watercourse due to environmental contamination that occurred as a result of the Contractor's entry onto ONTC's land to perform the Work, the Contractor shall be responsible for all costs incurred to complete remediation work on ONTC's land and adjacent land or watercourse and shall reimburse ONTC or any public authority or any third party for any reasonable costs incurred as a result of the requirement to complete the remediation work.
127. The Contractor shall have no responsibility for Environmental Contaminants existing in ONTC's land prior to the Contractor performing the Work and entering upon ONTC's land unless the Contractor causes the release or migration of the Environmental Contaminants while performing the Work.
128. As of the date for the commencement of the Work, the Contractor shall be responsible for taking all reasonable steps to ensure that no person's exposure to the Environmental Contaminants or any other toxic or hazardous substances discovered after the

commencement of the Work, exceeds the time weighted levels prescribed by the *Occupational Health and Safety Act* (Ontario) at the Work Site and that no property is damaged or destroyed as the result of exposure to, or the presence of the Environmental Contaminants or any other toxic or hazardous substances discovered after the commencement of the Work.

129. The Contractor shall be responsible for taking all necessary steps, in accordance with applicable law to dispose of, store or otherwise render harmless the Environmental Contaminants and to remove and place any Contaminated Soil Materials at a storage location on ONTC's land adjacent to the Work Site identified in writing from time to time by ONTC.
130. Notwithstanding any provision of law to the contrary, any Environmental Contaminants placed or permitted on or under ONTC's land by the Contractor shall remain the property of the Contractor.

Environmental Protection for Construction In and Around Waterbodies

131. 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.
132. 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 Contractor shall also notify ONTC of any such incidents. Failure to notify DFO of such incidents is a federal offence.
133. 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 Work Site. Updates to DFO may be provided at a later time, if required.
134. All spills and sediment releases into a waterbody during the Work must be immediately reported by the Contractor to ONTC 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 ONTC Representative 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.

Environmental Spills and Releases

135. All spills and releases of Environmental Contaminants in the course of the Work must be immediately reported by the Contractor to ONTC who will report the spill or release to the MOECP SAC. If the ONTC Representative is not available, the Contractor shall report the incident to the MOECP SAC and the ONTC RTC at 800-558-4129 or X 141.

136. 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, ONTC may direct others to remedy the situation.
137. 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 ONTC and ONTC shall be entitled to seek reimbursements for all costs associated with the remedial work including the cost of work done by third parties.
138. If the spill or release was not the fault of the Contractor, ONTC shall pay for the remedial work.

Impact Assessments

139. The Contractor shall be responsible for:
 - (a) 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,
 - (b) 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.
140. If the Contractor or ONTC observes or reasonably suspects the presence of any impacts described above that are not mentioned or accounted for in the Contract Documents or Impact Assessment Reports, if any, and related mitigation plans,
 - (a) The observing party shall immediately report the circumstances to the other party;
 - (b) The Contractor shall immediately take reasonable steps, including stopping the Work if necessary, to ensure that any potential impacts are mitigated; and,
 - (c) If ONTC and the Contractor do not agree on the existence, significance or mitigation measures for the impact, ONTC 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.
141. If the Contractor fails to comply with the requirements in section 140, the Contractor shall:
 - (a) Be responsible for all costs incurred by ONTC or the Contractor to mitigate the damage caused due to the failure;
 - (b) Not be entitled to request a Change Order relating to the failure to comply; and

- (c) Indemnify ONTC 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 section 140.

SUBMITTALS AND INTELLECTUAL PROPERTY

Submittals

- 142. All Submittals shall be the sole and absolute property of ONTC as and when created. The Contractor shall provide the Submittals in the form required by ONTC.

Contractor's Background IP

- 143. ONTC acknowledges that the Contractor remains the owner of all Intellectual Property Rights owned by or licensed to the Contractor prior to and after the date of this Agreement, other than any Intellectual Property Rights arising from the Work ("**Contractor Background IP**").
- 144. The Contractor grants to ONTC a fully paid, non-exclusive, worldwide, transferable (with the right to assign and sub-license), royalty free, irrevocable, perpetual licence of the Contractor's Background IP to use, make, have made, import and export any of the Contractor's Background IP to the extent necessary for ONTC to fully enjoy the Submittals for the Project, including for the purposes of repairing, maintaining or servicing (including the supply of replacement parts), or alterations, additions or expansions to the Work or the Work Site.
- 145. ONTC may sub-licence the Contractor's Background IP to any person for the purposes of providing services to, or performing work for, ONTC.

Work IP

- 146. All Intellectual Property Rights (including the Submittals) arising from and relating to the Work (the "**Work IP**"), from its creation, vests in ONTC and is the sole and absolute property of ONTC as and when created. The Contractor assigns all of its Intellectual Property Rights and waives all moral rights, and shall require Subcontractors to assign their Intellectual Property Rights and waive their moral rights, in and to the Work IP, if any, to ONTC.
- 147. The Contractor shall maintain the Work IP in confidence unless otherwise agreed in writing by ONTC.

CONFIDENTIAL INFORMATION

Non-Disclosure and Restricted Use

- 148. Except as otherwise permitted in the Contract Documents, the Contractor shall keep in confidence, any Confidential Information that it now has or that may come into its possession in the course of the Agreement, including information marked "Confidential",

and shall not, without ONTC's prior written consent, disclose the Confidential Information in any manner whatsoever, in whole or in part, and shall not use the Confidential Information for any purpose other than in connection with the Project. The Contractor may reveal or permit access to the Confidential Information only to Contractor Parties who need to know the Confidential Information, who must be advised of the confidential nature of the Confidential Information, who are directed by the Contractor to hold the Confidential Information in confidence and who agree to be bound by and to act in accordance with the terms and conditions of the Agreement. The Contractor shall take all necessary precautions or measures to prevent improper access to, or use or disclosure of, the Confidential Information by such parties and agrees to be jointly and severally responsible for any breach of the Agreement by any Contractor Parties.

149. The Contractor acknowledges that ONTC is subject to the provisions of the *Freedom of Information and Protection of Privacy Act* as amended from time to time.

CONFLICT OF INTEREST

150. 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 ONTC) with the provision of the Work pursuant to the Contract.
151. The Contractor shall disclose to ONTC, 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.

AUDITS

152. ONTC has the right to audit all financial and related records associated with the terms of the Agreement and the Contract Documents, including Submittals, timesheets, reimbursable out of pocket expenses, materials, goods and Construction Equipment claimed by the Contractor.
153. The Contractor shall at all times during the term of the Agreement and for a period of 6 years after the expiration or termination of the Agreement, keep and maintain records of the Work performed pursuant to the Agreement. The Contractor shall at its own expense make such records available for inspection and audit by ONTC at all reasonable times and without prior notice.

TITLE, RISK AND INSURANCE

Title and Risk

154. Title to all Work, including the Submittals and other items supplied by the Contractor or its Subcontractors, completed or in the course of completion and all Materials for this Project, except Construction Equipment shall become the property of ONTC upon the earlier of

payment by ONTC on account for such item or delivery to the Work Site. Notwithstanding the foregoing, until final completion of the Work and ONTC taking possession and control of the Work, the Contractor shall retain all risk with respect to and be responsible for: (a) all items supplied by ONTC, the Contractor or its Subcontractors that are to be incorporated into the Work or used in performing the Work; and (b) any Work completed or in progress.

Insurance

155. The Contractor shall obtain, and for as long as this agreement is in effect, maintain, pay for and, upon request by ONTC from time to time, provide evidence, satisfactory to ONTC, of the following insurance coverages, all taken out with insurers licensed to transact insurance business in Ontario and satisfactory to ONTC:

(a) Commercial General Liability Insurance:

- (i) With no limitations on or exclusions from coverage arising from working on or around railway property;
- (ii) Including "Ontario Northland Transportation Commission" as an additional insured;
- (iii) To a limit of not less than five million dollars (\$5,000,000) inclusive per occurrence;
- (iv) Including bodily injury, personal injury, death, damage to property, including loss of use thereof and product liability;
- (v) Without any restriction related to working on or near railway property;
- (vi) Including coverage for environmental liability;
- (vii) In a form satisfactory to ONTC; and
- (viii) Endorsed to endeavour to provide ONTC with not less than thirty (30) days' notice, in advance, of any cancellation, change or amendment restricting coverage.

(b) Automobile Liability Insurance:

- (i) In respect of licensed vehicles,
- (ii) To a limit of not less than two million dollars (\$2,000,000) inclusive per occurrence,
- (iii) Including bodily injury, death and damage to property,

- (iv) Endorsed to endeavour to provide ONTC with not less than thirty (30) days' notice, in advance, of any cancellation, change or amendment restricting coverage, and
 - (v) In the following forms: standard owner's form automobile policy providing third party liability and accident benefits insurance and covering licensed vehicles owned or operated by or on behalf of the Contractor, and standard non-owned automobile form policy including standard contractual liability endorsement.
- (c) Pollution Liability Insurance:
 - (i) With coverage for damages to ONTC's property and adjacent land and watercourse due to a contravention of Environmental Laws or the *Fisheries Act*;
 - (ii) To a limit of not less than five million dollars (\$5,000,000) inclusive per occurrence; and,
 - (iii) Endorsed to endeavour to provide ONTC with not less than thirty (30) days' notice, in advance, of any cancellation, change or amendment restricting coverage.
- 156. If any of the Contractor's insurance policies expire during the term of this agreement, the Contractor shall renew or replace them and, within sixty (60) days after such expiry, provide to ONTC certificates of the renewed/replaced insurance.
- 157. The Contractor shall ensure that all the insurance is primary and does not call into contribution any other insurance coverage available to ONTC. The Contractor shall not do or omit to do anything which would impair or invalidate the insurance policies.
- 158. If the Contractor fails to take out or maintain the above-described insurance, ONTC may, in its discretion, terminate this agreement immediately or take over and maintain such insurance, whereupon the Contractor shall immediately pay to ONTC any premium paid by ONTC for such insurance.

Workers' Compensation

- 159. The Contractor shall ensure all its and its Subcontractors' employees, consultants, representatives and agents and visitors attending at the Work Site, or any of them who perform Work but do not attend at the Work Site, are registered for workers' compensation coverage.
- 160. The Contractor shall provide to ONTC a current certificate under the WSIA confirming that the Contractor has complied with its obligations under the WSIA and whenever a certificate has expired and been replaced with a new, current, certificate, the new certificate shall be provided to ONTC.

Contract Security

161. If required by the procurement documents, the Contractor shall provide a performance bond and a labour and materials payment bond, each issued by a bonding company acceptable to ONTC and licensed to issue such instruments in the Place of the Work, in the amounts and forms as follows:
- (a) Amount of the performance bond shall be equal to not less than 50% of the Contract Price, in the form prescribed by the Construction Act; and,
 - (b) Amount of the 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.
162. The bonds shall guarantee the faithful performance of the contract in accordance with the Contract Documents, including the requirements for warranties, and the payment of all obligations incurred by ONTC in the event of the Contractor's default, including but not limited to the following:
- (a) the payment of legal, accounting, architectural, engineering and other consultant's expenses incurred by ONTC 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,
 - (c) the payment of additional expenses to ONTC 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.
163. Without limiting the foregoing, the bonds shall indemnify and hold harmless ONTC for 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.
164. The Contractor shall be responsible for notifying the surety company of any changes made to the Contract Documents during the course of construction.
165. The premiums for bonds required by the Contract Documents shall be included in the Contract Price.
166. Should ONTC require additional bonds by the Contractor or any of its Subcontractors, after the receipt of the Contractor's submission for the Work, the Contract Price shall be increased by the actual costs attributable to providing such bonds. The Contractor shall promptly provide ONTC with any such bonds that may be required.

WARRANTY

167. The Contractor warrants the Restoration Work free from Defect including the sinking of any fill to a non-level state and the failure to thrive of any landscaping work for a warranty period of one year from the date of Substantial Performance of the Work or, if Substantial

Performance of the Work was not certified, two years from the date of Final Completion of the Work (the “**Warranty Period**”).

168. ONTC shall promptly give the Contractor notice of observed Defects which arise during the Warranty Period. Following the receipt of the notice, the Contractor shall remedy, at the Contractor’s expense, the Defects in the Work within 10 Working Days of receipt of the notice, or such other period directed by ONTC, acting reasonably (the “**Remediation Period**”). The Contractor shall correct or pay for damage resulting from such remediation.
169. If the Contractor fails to remedy a Defect within the Remediation Period, ONTC may upon written notice to the Contractor, in its sole discretion, either proceed to remedy the Defect itself or contract a third party to remedy the Defect (including redesign costs, and costs related to damages arising from such Defect). ONTC shall be entitled to recover from the Contractor the costs thereof or may deduct the money from any monies due or that become due to the Contractor, including any Warranty Holdback.
170. The Contractor further warrants any and all remedial work it performs for a further period of one year from completion of the remedial work.
171. ONTC may hold back, 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 (the “**Warranty Holdback**”). In the event the Contractor fails to correct a Defect 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, ONTC shall have the right to use the Warranty Holdback money, or such part of it still being held by ONTC, to pay for the costs of remedying the Defect and any redesign, reconstruction or other costs relating to the Defect. 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 ONTC. The Contractor shall have the right to invoice ONTC for the balance of the Warranty Holdback at the end of the warranty period or extended warranty period.
172. Acceptance of the Work by ONTC shall not relieve the Contractor from any responsibility for Defects.
173. The Contractor shall assign to ONTC all warranties, guarantees or other obligations for Work, services or Materials 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 agreement. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of ONTC under the Contract Documents.

SUSPENSION AND TERMINATION

Suspension

174. ONTC may suspend the Work at any time and for any reason upon providing notice to the Contractor and such notice shall have immediate effect, unless stated otherwise. At the

end of the suspension period, ONTC and the Contractor may negotiate in good faith any adjustments to the Contract Price, the Contract Time or the Construction Schedule to account for the time in which the Work was suspended. The Contractor shall not be entitled to any adjustment where the suspension was a result of any act or omission of the Contractor.

Termination for Convenience

175. ONTC may terminate this Contract at any time for any or no reason. Such termination shall be effective upon the date specified in ONTC's Notice in writing advising of the termination of the Contract pursuant to this section. In such event, ONTC 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. ONTC 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 receiving the Notice of termination by ONTC, the Contractor shall deliver a Notice in writing to each of its Subcontractors confirming the effective date of the termination.

Contractor Default

176. The Contractor is in default under the Contract Documents if any of the following occurs:
- (a) The Contractor becomes insolvent or makes a general assignment for the benefit of its creditors, enters into a plan of arrangement for the benefit of its creditors or otherwise acknowledges its insolvency or if a bankruptcy or receiving order is filed or made against it;
 - (b) the Contractor commits a breach of the health and safety plan applicable to the Work Site;
 - (c) the Contractor abandons the Work for a period which exceeds 7 days from receipt by the Contractor of a written request from ONTC to return to the Work Site;
 - (d) the Contractor assigns the Contract Documents or any right or obligation under the Contract Documents or subcontracts the Work without the prior written consent of ONTC; or,
 - (e) the Contractor commits a breach of any of the terms of the Contract Documents (other than a breach already referred to in this section), and upon receiving notice of such breach from ONTC, the Contractor fails to remedy such breach within 7 days after receipt of notice from ONTC of the breach.

If the Contractor is in default, ONTC shall be entitled to immediately terminate this Agreement upon providing notice to the Contractor and/or to exercise any one of its rights in section 177.

Remedies of ONTC for Default

177. Upon the occurrence of a Contractor default, provided ONTC has given the Contractor notice, ONTC may, without prejudice to any of its other rights and remedies, do any or all of the following in its sole discretion:
- (a) terminate the Agreement in its entirety by written notice having immediate effect and within 5 Working Days publish a notice of termination (Form 8) in accordance with the *Construction Act*;
 - (b) take any action ONTC considers appropriate to rectify or attempt to rectify the Contractor's default but shall not be obligated to do so and all costs and expenses incurred by ONTC in rectifying or attempting to rectify the Contractor's default, together with interest thereon, shall be payable by the Contractor on demand. Such action by ONTC shall not be deemed a termination;
 - (c) take possession of all goods and the Contractor's Construction Equipment, Materials and plant and shall have the right to use the same to complete, or arrange to have completed, the Work;
 - (d) withhold all further payments to the Contractor, subject to ONTC's rights of set off, and use any amounts withheld for any purpose to advance the Project, and upon final completion, recover from the Contractor any liability incurred or suffered by ONTC as a result of, or arising out of, or in any way in connection with, the Contractor default;
 - (e) make a claim against any applicable contract security required to be provided by the Contractor; and,
 - (f) recover all legal costs and expenses on a full indemnity basis that were incurred by ONTC associated with the termination.

ONTC Default

178. ONTC shall be in default under the Contract Documents if any of the following occur:
- (a) ONTC becomes insolvent or makes a general assignment for the benefit of its creditors, enters into a plan of arrangement for the benefit of its creditors or otherwise acknowledges its insolvency or if a bankruptcy or receiving order is filed or made against it upon which time the Contractor may, without prejudice to any other right or remedy the Contractor may have, terminate the Agreement by giving ONTC or receiver or trustee in bankruptcy written notice to that effect and within 5 Working Days publish a notice of termination (Form 8) in accordance with the *Construction Act*; or
 - (b) ONTC fails to make an undisputed payment that is due and payable within the payment period in accordance with the Contract Documents and upon receiving

notice of such breach from the Contractor, ONTC failing to remedy such breach within 20 Working Days of notice of such breach, in which case, the Contractor, shall be entitled to immediately terminate this Agreement upon providing written notice to ONTC and within 5 Working Days publish a notice of termination (Form 8) in accordance with the *Construction Act*.

On Termination

179. If the Agreement is terminated under sections 175 or 178, ONTC shall pay the Contractor all undisputed applications for payment due to the Contractor for Work performed in the relevant period, together with reasonable and auditable demobilization costs and other direct costs the Contractor reasonably incurs and provides satisfactory evidence for in terminating the Agreement, including reasonable cancellation fees payable to its Subcontractors. The amount to be paid under this section is the Contractor's sole claim for payment for termination.
180. If the Agreement, in whole or in part, is terminated:
- (a) The Contractor shall immediately deliver to ONTC all the Submittals and all other documents and work product arising in connection with the Work, completed or in progress;
 - (b) the Contractor shall effect an orderly transition to any contractor replacing the Contractor for the completion of the Work;
 - (c) as directed by the ONTC Representative, subject to section 176(c), remove from the Work Site any property of or in the possession or control of the Contractor prior to the effective date of termination other than property belonging to ONTC or to be incorporated in the Work. ONTC may, without any liability whatsoever and at the Contractor's sole expense, remove or dispose of any such property left at the Work Site after such date; and
 - (d) all terms and obligations set forth in the Agreement that by their terms or nature continue to apply to the Contractor following termination or expiration of the Agreement shall apply.

INDEMNITY AND LIABILITY

General Indemnities

181. The Contractor shall indemnify ONTC and its officers, directors, employees, consultants, contractors and agents (collectively the "**ONTC Indemnitees**") and save them harmless from and against all losses, claims, liabilities, damages and costs ("**Loss**") which may arise by reason of the exercise of the responsibilities and obligations contained herein by the Contractor or as a result of any breach of the terms of this Agreement by the Contractor or by any act or omission of the Contractor or Contractor Parties or those for whom the Contractor is at law responsible, including all legal costs and expenses reasonably

incurred by ONTC in connection with the defence or settlement of any such Loss, unless such Loss is caused by the negligent act or omission of ONTC or those for whom it is in law responsible. For the purpose of enforcement of this indemnity, ONTC is acting as agent and trustee for the ONTC Indemnitees.

182. The Contractor shall indemnify ONTC and ONTC Indemnitees and save them harmless from and against all Loss incurred by ONTC arising from:
- (a) Any decision or interpretation by any court or governmental authority that: (i) any of the Contractor Parties is an employee of ONTC; or (ii) ONTC is liable to pay statutory contributions or deductions in respect of any of the Contractor Parties 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 Parties may have during or after the term of this Agreement;
 - (c) a claim by any third party against ONTC alleging that the Work IP and its use by ONTC, infringes any Intellectual Property Rights;
 - (d) safety infractions committed by the Contractor under the *Occupational Health and Safety Act*; and,
 - (e) 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 a Contractor Party and mishandled or handled negligently or improperly.

Exception

183. The Contractor shall not be liable for any Loss arising from errors or omissions in any of the information which is supplied to the Contractor by ONTC.

Bodily Injury and Property Damage

184. The Contractor shall make full and complete compensation for any bodily injury or death to any person and for any damage caused to ONTC's physical property by and act or omission of the Contractor or a Contractor Party or those for whom it is at law responsible.

Waiver

185. The Contractor waives against ONTC and ONTC Indemnitees any claims of any kind whether directly or indirectly arising out of or connected with the existence of this Agreement or for any injury to or death of any person or for any loss of or damage to any property belonging to the Contractor or Contractor Parties and for any loss or damage of the Contractor unless caused by the negligent act or omission of ONTC or ONTC Indemnitees.

Limitation of Liability

186. Notwithstanding any other provision of this Agreement,

- (a) ONTC 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 ONTC has been advised of the possibility of such damages; and,
- (b) Any express or implied reference to ONTC providing an indemnity or any other form of indebtedness or contingent liability that would directly or indirectly increase the indebtedness or contingent liabilities of ONTC, whether at the time of execution of this Agreement or at any time during the Term or Renewal Term, 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.

Survival

187. The provisions in this part – Indemnity and Liability shall survive the expiry or termination of this Agreement.

DISPUTE RESOLUTION

188. 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 unresolved claims, disputes or controversies of any kind arising out of or in connection with this Agreement or the provision of the services (hereafter referred to as the “**Dispute**”) in a tiered approach as follows:

- (a) A Dispute shall be referred to ONTC’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.
- (b) If unresolved, after following the process described in (a), the Dispute shall be referred to the ONTC 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.
- (c) If unresolved after following the process described in (b), and only at the election of ONTC, the Dispute shall be referred to the CEO of ONTC and the most senior executive employee of the Contractor for resolution within a period not to exceed thirty (30) days. If ONTC does not elect, at its sole option, to proceed under this section, the Dispute may proceed under either step described in sections 189, 191 or 192.

189. If the Dispute remains unresolved despite the Parties' attempting to resolve it following the process in section 188 (a) to (c), 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*. Where either party has delivered a notice of Adjudication in a form prescribed by the *Construction Act*, the procedures and rules set out under the *Construction Act* and the regulations thereto shall govern the Adjudication.
190. Other than where the Contractor is obliged to commence an Adjudication pursuant to an undertaking under the *Construction Act*, neither ONTC nor the Contractor shall commence an Adjudication during the Restricted Period (Adjudication).
191. If the Dispute remains unresolved despite the Parties attempting to resolve it following the process in section 188 (a) to (c), or following a determination of the Dispute pursuant to an Adjudication, 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 section 188 (b) or (c), 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 section, 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.
192. If neither party elects to proceed to mediation within the timelines outlined in section 191, 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*, 1991, S.O. 1991, c. 17 (hereafter referred to as the "**Arbitration Act**") as amended 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.
193. The timelines in this part – Dispute Resolution may be amended by mutual agreement of the Parties.

HEALTH AND SAFETY

194. The Contractor shall be solely responsible for construction safety at the Work Site and for compliance with the rules, regulations and practices required by the applicable laws and

shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work.

195. 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 Work Site. If the Work Site is located on ONTC's premises, the Contractor shall comply with all ONTC's policies and directions to ensure the health and safety of ONTC's employees and contractors as well as the Contractor Parties. The Contractor shall indemnify and hold harmless ONTC for any fines, penalties or other costs imposed or assessed on or incurred by ONTC 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.
196. Prior to the commencement of the Work, the Contractor shall submit to ONTC documentation of the Contractor's health and safety policy and programs and a copy of the Notice of Project filed with the Ministry of Labour naming itself as "Constructor" under the Ontario *Occupational Health and Safety Act*.
197. The Contractor shall ensure that it and its employees and Subcontractors are aware of and, while being on ONTC's property, comply with ONTC'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.

PRIOR SERVICES OR WORK

198. Any aspect of the Work provided for herein which has been performed by the Contractor prior to the execution of this Agreement and any payment made by ONTC for such work shall be deemed to be subject to and performed and paid under this Agreement.

GENERAL

199. **No Waiver:** No waiver by a party of any breach by the other party of any of its covenants, agreements or obligations in this Agreement shall be a waiver of any subsequent breach or the breach of any other covenants, agreements or obligations, nor shall any forbearance by a party to seek a remedy for any breach by the other party be a waiver by the party of its rights and remedies with respect to such breach or any subsequent breach. The subsequent acceptance of any remittances from the Contractor by ONTC shall not be deemed a waiver of any preceding breach by the Contractor regardless of ONTC's knowledge of such preceding breach at the time of the acceptance of such compensation.

200. **Relationship:** Nothing contained in this Agreement 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.
201. **Governing Law:** This Agreement shall be governed by and constituted in accordance with the laws in force in the Province of Ontario without regard to 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 Agreement or the performance of the obligations hereunder.
202. **Severability:** Should any section or part or parts of any section in this Agreement be illegal or unenforceable, it or they shall be considered separate and severable from the Agreement and the remaining provisions of this Agreement shall remain in full force and effect and shall be binding upon ONTC and the Service Provider as though such section or part or parts thereof had never been included in this Agreement.
203. **Entire Agreement:** This Agreement constitutes the entire agreement and understanding of the parties and supersedes any and all prior understandings, discussions, negotiations, commitments, representations, warranties, and agreements, written or oral, express or implied between them with respect to the subject of this Agreement. No amendment, variation or change to this Agreement shall be binding unless the same shall be in writing and signed by the parties.
204. **Survival:** In addition to those provisions which are expressly stated to survive the termination or expiration of this Agreement, the provisions of this Agreement that are by their nature intended to survive termination or expiration of this Agreement shall continue in full force and effect subsequent to and notwithstanding termination or expiration until or unless they are satisfied.
205. **Counterparts and Electronic Delivery:** This Agreement may be executed and delivered by facsimile or electronic transmission and the parties may rely upon all such facsimile or electronic signatures as though such facsimile or electronic signatures were original signatures. This Agreement may be executed in any number of counterparts and all such counterparts shall, for all purposes, constitute one agreement binding on the parties.
206. **Notice:** Any notice, consent, acceptance or approval required or permitted to be given in connection with the Contract Documents shall be in writing and shall be sufficiently given if delivered to the recipient party if sent to the address of the party set out below by personal delivery, courier or email.

To ONTC

Ontario Northland Transportation Commission
555 Oak Street East
North Bay, ON P1B 8L3
Attention:
E:
T:

And to legal@ontarionorthland.ca

To Contractor

[Contractor]

[Address]

Attention:

E:

T:

Any notice delivered or transmitted to a party shall be deemed to have been given and received on the day it is delivered or transmitted, provided that if it is delivered or transmitted on a day that is not a Working Day, then the notice shall be deemed to have given and received on the next Working Day. Any party may, from time to time, change its contact information by giving notice to the other party in accordance with this section.

207. **Assignment and Enurement:** The Contractor may not assign this Agreement (or the proceeds thereof) or subcontract its obligations under this Agreement without the express consent of ONTC, which consent may be withheld or conditioned in ONTC's sole and absolute discretion. This Agreement enures to the benefit of and it is binding upon the parties and their respective successors and permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS AGREEMENT.

**ONTARIO NORTHLAND
TRANSPORTATION COMMISSION**

Per

Date _____

I have authority to bind the corporation.

XXX

Per

Date _____

I have authority to bind the corporation.

Schedule A – Scope of Work

Schedule B – Contractor's Submission

Schedule C – Project-Specific Requirements for a Proper Invoice

To satisfy the requirements for a Proper Invoice, the following criteria, as may be applicable in each case, must be included with the Contractor's application for payment:

- (a) Be in the form of a written bill, invoice, application for payment, or request for payment;
- (b) Be in writing;
- (c) Contain the Contractor's name, telephone number and mailing address and contact information of the Contractor's project manager;
- (d) Contain the title of the Project and ONTC'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;
- (e) Contain the date the written bill, invoice, application for payment, or request for payment is being issued by the Contractor;
- (f) Identify the period of time in which the labour and/or materials were supplied to ONTC;
- (g) Reference to the provisions of the Agreement under which payment is being sought (e.g. progress payment / milestone, holdback, final payment, etc.);
- (h) A description, including quantities where appropriate, of the services or materials, or a portion thereof, that were supplied and form the basis of the Contractor's request for payment;
- (i) The amount the Contractor is requesting to be paid by ONTC, set out in a statement based on the schedule of values approved under section 38 of the Agreement, separating out any statutory or other holdbacks, set-offs and HST;
- (j) With each application for payment after the first, a Statutory Declaration, in the form prescribed by ONTC, stating that all accounts for labour, subcontracts, Materials, Construction Equipment and other indebtedness which may have been incurred by the Contractor and for which ONTC 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;
- (k) A current Workplace Safety Insurance Board clearance certificate;
- (l) An updated Construction Schedule in the format(s) required under sections 32 and 33 of the Agreement;
- (m) If requested by ONTC, a current and valid certificate(s) of insurance for the insurance required pursuant to the Agreement;
- (n) The following statement: "Provided this Proper Invoice complies with the requirements of the Agreement and provided no Notice of Non-Payment is issued by ONTC, payment is due within 28 days from the date this Proper Invoice is received by ONTC.";

- (o) 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;
- (p) In the case of the Contractor's application for final payment;
 - (i) Sufficient evidence that the Contractor has delivered all warranties to ONTC;
 - (ii) Sufficient evidence that the Work Site has been left in a clean and tidy condition, including evidence that any remaining Materials, tools, Construction Equipment, temporary work, and waste products and debris have been removed from the Work Site;
 - (iii) 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 ONTC;
- (q) Information identifying the authority, whether in the Contract Documents or otherwise, under which the services or materials were supplied;
- (r) Any other information that is prescribed in Schedule A or identified by ONTC as required;
- (s) The amount invoiced to date;
- (t) The percentage of the Contract Price invoiced; and
- (u) The individual value of Change Orders approved during the invoice period and the cumulative value of Change Orders for the Project.