



**Halifax**  
Regional Centre for Education

## RFP #4238

### Roof Replacement and Localized Envelope Repairs Rockingstone Heights School

RFP Closing Date: Thursday June 13<sup>th</sup>, 2024  
RFP Closing Time: 2:00 PM (ATL)  
Submission Email: [hrcetenders@hrce.ca](mailto:hrcetenders@hrce.ca)

Ready-for-Takeover Date: August 30, 2024

HRCE Procurement Contact:  
Nancy Rideout, Purchasing Manager  
Tel: (902) 464-2000 ext 2222  
Email: [nrideout@hrce.ca](mailto:nrideout@hrce.ca)

Operations Contact:  
Gary Mannette, Project Manager  
Cell: (902) 497-8542  
Email: [gmannette@hrce.ca](mailto:gmannette@hrce.ca)

School Location:  
Rockingstone Heights School  
1 Regan Drive  
Halifax, NS, B3R 2J1

Mandatory Site Meeting for Bidders:  
Monday June 3<sup>rd</sup>, 2024, at 4:00pm  
Rockingstone Heights School  
Please meet at School Entrance

RFP submissions are to be submitted by email to: [hrcetenders@hrce.ca](mailto:hrcetenders@hrce.ca)

RFP documents are available for download from the HRCE's Website:  
<https://www.hrce.ca/about-hrce/financial-services/tenders/tender-listing>

In the light of COVID-19 and future pandemics, all vendors are required to follow the guidelines set in place by Nova Scotia Health Authority. Potential risks such as restricted accessibility to schools and buildings of the Halifax Regional Centre for Education (HRCE), inability to complete work on a timely manner due to social distancing, disabled supply chains which will result in delivery delays of raw materials and finished goods, labour shortages and additional storage costs should be clearly communicated with the HRCE Personnel on a timely manner to ensure an amicable solution can be agreed between the HRCE and the vendor/contractor. The HRCE will not be liable for any direct or indirect loss incurred due to a pandemic.

***The Terms and Conditions of the RFP Package, including but not limited to the Contract Type and Supplementary Conditions have been modified.***

***It is the Proponent's Responsibility to review all sections of the RFP prior to submitting a Proposal/Bid.***

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**SPECIFICATIONS ..... 180 pages**

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02 41 19	Selective Demolition and Removal	6
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06 10 00	Rough Carpentry	6
<b>07</b>	<b>THERMAL AND MOISTURE PROTECTION</b>	
07 46 19	Steel Siding	8
07 52 16	SBS Modified Bituminous Membrane Roofing	34
07 62 00	Sheet Metal Flashing and Trim	8
07 92 00	Joint Sealants	6
<b>08</b>	<b>OPENINGS</b>	
08 11 00	Metal Doors and Frames	19
01 11 13.07	Door Hardware	10

**DRAWING LIST ..... 11 pages**

R1	ROOF PLAN	
CMM125	CURB DETAIL	
DMM129	NEW DRAIN DETAIL	
GMM288	EAVE DETAIL AT NEW MOD. BIT. ROOF	
JMM352	EXPANSION JOINT DETAIL	
LMM412	DOOR SILL DETAIL	
MNN905	LADDER DETAIL	
RMM533	WALL FLASHING DETAIL	
RMM640	REGLET FLASHING DETAIL	
SMM581	PLUMBING STACK FLASHING DETAIL	
VMN928	WALKWAY/PAVER DETAIL	

**END OF DOCUMENT ..... 1 Page**



## SECTION 00 00 15 - DESCRIPTION OF WORK & LIST OF DRAWINGS

### 1. General

- 1.1 The work of this contract includes the provision of all materials, labour and equipment necessary to complete the **Roof Replacement and Localized Envelope Repairs at Rockingstone Heights School** to remove the existing roof and materials in areas as noted on the drawings and specifications prepared by **Rimkus Consulting Group Canada Ltd.**
- 1.2 It is the intent of the Halifax Regional Centre for Education (HRCE) to have all work completed, to the point of Ready-for-Takeover, prior to **August 30, 2024**. It is expected that a timely award of this contract will enable the Contractor to facilitate shop drawing review and ordering of materials to allow commencement of work immediately after contract execution.
- 1.3 The whole of the work shall agree in all particulars with the levels, measurements and details contained in the drawings accompanying this specification and with such other drawings or information as may from time to time be supplied by the HRCE or may be supplied by the Contractor and reviewed by the HRCE.
- 1.4 The HRCE has transitions from the CCDC-2, 2008 contract to the CCDC-2, 2020 contract and will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the Contract Documents.
- 1.5 The HRCE Supplementary General conditions for the CCDC-2, 2020 applicable to this work is available for review under Section 00 73 00 of the RFP document.
- 1.6 In relation to the hours of work: Work for the HRCE is to be completed during hours when the schools are unoccupied, unless otherwise authorized in writing by the Project Manager (Operations Contact person) or designate. Hours of work shall comply with the local ordinances and bylaws for each site. (Refer Section 00 41 13, Section 3.7)

## 2. Drawings

R1	ROOF PLAN
CMM125	CURB DETAIL
DMM129	NEW DRAIN DETAIL
GMM288	EAVE DETAIL AT NEW MOD. BIT. ROOF
JMM352	EXPANSION JOINT DETAIL
LMM412	DOOR SILL DETAIL
MNN905	LADDER DETAIL
RMM533	WALL FLASHING DETAIL
RMM640	REGLET FLASHING DETAIL
SMM581	PLUMBING STACK FLASHING DETAIL
VMN928	WALKWAY/PAVER DETAIL

END OF SECTION

## SECTION 00 05 00 - LIST OF CONSULTANTS

**Owner:** Halifax Regional Centre for Education  
33 Spectacle Lake Drive  
Dartmouth, NS B3B 1X7

Nancy Rideout, Purchasing Manager  
Office: (902) 464-2000 ext 2222  
[nrideout@hrce.ca](mailto:nrideout@hrce.ca)

**Consultant:** Rimkus Consulting Group Canada Inc.  
69 Maple Avenue  
New Glasgow, NS B2H 2B3

Krishna Jagadeeshchandra  
Office: (782) 440-2753  
[krishna.jagadeeshchandra@rimkus.com](mailto:krishna.jagadeeshchandra@rimkus.com)

END OF SECTION

## SECTION 00 21 13 – INFORMATION FOR PROPONENTS

### Invitation:

#### 1. Proposal Call

- 1.1. The Halifax Regional Centre for Education (HRCE) will receive offers in the form of a two-file proposal from proponents which is signed and electronically received on or before the date and time specified on the cover sheet of this document. The email address to submit submissions and amendments is [hrcetenders@hrce.ca](mailto:hrcetenders@hrce.ca). Both files should be submitted in Adobe (.pdf) format. If the electronic submission is larger than 20MB, proponents have the option of sharing files from google drive to [hrcetenders@gnspecs.ca](mailto:hrcetenders@gnspecs.ca). If you encounter difficulties kindly contact the HRCE Procurement team for further clarification.
- 1.2. Proposals received after the closing time will not be considered.
- 1.3. Proponents are to submit completed Request for Proposal (RFP) documents by email.

The technical submission electronic file should be named:

**“Technical Submission\_4238\_Proponent Name”**.

The second file (Price Submission) should be named:

**“Price Submission\_4238\_Proponent Name”**.

There must be no reference to the bid price within the technical submission.

Proponents can refer to item 11 in this section for more detailed submission instructions.

- 1.4. Proposals will be opened at the time indicated on the cover sheet of this document. Public openings are no longer held for any Tenders or RFPs relating to goods, services or construction for the HRCE. **The technical submission will be the only file opened during the RFP closing.** All proposal submissions are subject to evaluation after opening and before award of contract. The successful proponent and award amount will be posted on the Procurement Services website (<http://novascotia.ca/tenders/tenders/ns-tenders.aspx>) after award.
- 1.5. Amendments to the submitted offer will be permitted if received by email prior to bid closing and if endorsed by the same party or parties who signed and executed the offer.

If the amendment relates to the technical submission, the electronic file should be named

**“Technical Submission Amendment\_4238\_Proponent Name”**.

If the amendment relates to the price submission, the file should be named:

**“Price Submission Amendment\_4238\_Proponent Name”.**

The price amendment file submission should be the signed Price Amendment Form (Section 00 41 73) and shall not disclose either the original or revised total price.

- 1.6. Bid submissions **will not** be accepted by fax, mail, courier or hand delivery.

**2. Intent**

- 2.1. The intent of this Request for Proposals (RFP) is to obtain an offer to perform all work associated with ***RFP #4238, Roof Replacement and Localized Envelope Repairs*** at ***Rockingstone Heights School*** for a Stipulated Price Contract in accordance with the Contract Documents.
- 2.2. The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the contract documents.
- 2.3. The HRCE Supplementary General Conditions for the CCDC-2, 2020, applicable to this work is available for review under Section 0073 00 of the RFP document.
- 2.4. Ready-for-Takeover (RFT) of the project is to be achieved on or before **August 30, 2024**, provided the contract is awarded within fifteen (15) business days after the RFP closing.
- 2.4.1. If the contract is not awarded within fifteen (15) business days of closing, the Ready-for-Takeover Date will be extended by one (1) business day, for every business day that passes, until the contract has been awarded.
- 2.4.2. Receipt of the award letter by the successful contractor does not constitute approval to begin work on site.
- 2.5. The HRCE does not guarantee the award of all areas, phases or any portion thereof.
- 2.6. The HRCE reserves the right to award individual areas or phases to one contractor or between multiple contractors.
- 2.7. The HRCE reserves the right to reduce the scope of work if the stipulated bid amount exceeds the budget for the relevant project.

**3. Scope of work**

- 3.1. Refer to Section 00 00 15 – Description of Work and List of Drawings and Section 01 11 00 Summary of Work.

**4. Availability**

- 4.1. RFP documents are available for download on the HRCE website:  
<https://www.hrce.ca/about-hrce/financial-services/tenders/tender-listing>
- 4.2. RFP documents are made available only for the purpose of obtaining offers for this project. Their use does not confer a license or grant for other purposes.

4.3. The HRCE is not responsible for accuracy of documents obtained from any other source.

## 5. Examination

5.1. RFP documents are provided to the Construction Association of Nova Scotia (CANS).

5.2. Upon receipt of RFP documents, proponents are to verify that documents are complete.

5.3. Bidders are responsible to retrieve all RFP documents from the HRCE website and fully review the RFP requirements prior to the preparation of a bid submission.

## 6. Clarification and Addenda

6.1. Proponents must notify the Purchasing Manager, by email at [nrideout@hrce.ca](mailto:nrideout@hrce.ca) no less than **five (5)** working days before the RFP Closing regarding any questions, omissions, errors or ambiguities found in the documents. If HRCE considers that correction, explanation or interpretation is necessary, an addendum will be posted on the HRCE website.

6.2. Addenda will be issued no less than three (3) business days before the RFP closing date and will form part of the Contract Documents.

6.3. All RFP information must be confirmed by written addenda. The HRCE and its representatives shall not be bound by or be liable for any representation or information provided verbally. Information obtained by any other source is not official and will not bind the HRCE.

6.4. Proponents are to complete Price Submission Form (section 00 41 13) acknowledging each addendum that was issued.

6.5. Where the HRCE publishes an Addendum modifying the terms of the posting documents, or changing the Project or Contract Documents in any manner, the HRCE shall not be liable for any expense, cost, loss, or any form of damage or damages incurred or suffered; whether directly or indirectly, by any Supplier or any other person in connection with or in any way relating to or resulting from the publication of an Addendum, regardless of whether the publication occurs prior to or after a Supplier has submitted their bid submission.

6.6. All Addenda issued by HRCE shall become part of the Contract Documents, unless specifically excluded from the Contract Documents in writing. Addenda shall be allowed for in determining the total contract price.

## 7. Product/System Options

7.1. Alternatives to specified products and systems will only be considered during the bidding period in the manner prescribed below.

7.1.1. Where the RFP documents stipulate a particular product, alternatives may be considered by the Consultant up to five (5) working days before the RFP closing date

and time. Bidders must forward their written requests by email to [nrideout@hrce.ca](mailto:nrideout@hrce.ca).

Requests will be forward to the appropriate person(s) for review.

- 7.2.** The submission must provide sufficient information to enable the Consultant to determine acceptability of such products. Request for an alternate product/system must be accompanied with:
- 7.2.1.** information about how the request affects other work in order to accommodate each alternate;
  - 7.2.2.** the dollar amount of additions to or reductions from the Price Submission, including revisions to other work.
  - 7.2.3.** A later claim by the bidder for an addition to the contract price because of changes in work necessitated by use of alternates shall not be considered.
- 7.3.** When a request to substitute a product is made and pursuant to consultation with the Consultant, HRCE may approve or disapprove the substitution. The bidder making the request will be notified of the HRCE's decision and if the alternate is approved, the HRCE will issue an addendum.
- 7.4.** Alternates must be submitted in the above manner; otherwise, they will not be accepted.

## **8. Mandatory Bidders' Site Meeting (Site Assessment)**

- 8.1.** Bidders will be deemed to have familiarized themselves with the existing project site, working conditions and all other conditions which may affect performance of the Contract. No plea of ignorance of such conditions as a result of failure to make all necessary examinations will be accepted as a basis for any claims for extra compensation or an extension of time.
- 8.1.1.** A mandatory bidders' site meeting has been scheduled as per the information on the cover sheet of this document. All bidders are required to attend. Representatives of HRCE and the Consultant will be in attendance.
  - 8.1.2.** Bidders must register their presence with the HRCE stating the name of the contractor they represent. Failure to attend and register will lead to non-acceptance of the proposal by HRCE. HRCE recommends that interested bidders ensure that their proposed subcontractors attend the mandatory site meeting.

## **9. Bidders Registration**

- 9.1.** The successful contractor and sub-contractors must comply with the Nova Scotia Corporations Registration Act and/or Partnerships and Business Name Registration Act, or equivalent, before a contract is awarded.

## **10. Qualifications (Subcontractors/Other Tradespersons/Individuals)**

- 10.1.** Bidders are fully responsible to the HRCE for the acts/omissions of subcontractors and of persons directly or indirectly employed or retained by them. Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the HRCE. Subcontracting the contract shall not relieve the Bidder from any contractual obligations.
- 10.2.** Bidders must provide subcontractors with a copy of the RFP documents making subcontractors aware that the HRCE is not responsible for any payments to subcontractors, and that all actions, directions or claims are solely between the bidder and the subcontractor.
- 10.3.** The Contract, or any portion thereof, shall not be assigned nor sub-contracted without the prior written approval of HRCE, which approval may be withheld in the HRCE's sole discretion. When sub-contracting, successful bidder(s) must be prepared, if requested, to provide copies of billings from subcontractors.
- 10.4.** Successful bidder(s) shall only use additional subcontractors during the course of the contract with the prior written approval of the HRCE.
- 10.5.** The successful bidder(s) shall not re-assign the role of Project Manager to another individual other than the proposed Project Manager as indicated in the technical submission, without prior written approval from the HRCE.
- 10.6.** The successful bidder(s) shall at all times enforce strict discipline and good order among their employees and subcontractors and shall avoid any unfit person or any person not skilled in the work assigned to the employee.
- 10.7.** HRCE reserves the right to reject a proposed sub-contractor for a reasonable cause.
- 10.8.** Refer to GC 3.6 of CCDC-2020.

## **11. PROPOSAL SUBMISSION**

- 11.1. RFP Proposal Package - A complete proposal package is comprised of the elements below:**
- 11.2. Technical Submission and Price Submission - General**
  - 11.2.1.** Each proposal shall include a signed technical submission file and a signed price submission file, clearly labelled as previously instructed in Section 00 21 13, item 1.3.
  - 11.2.2.** Both the Technical Submission files, and the separate Price Submission file, shall be submitted simultaneously.
  - 11.2.3.** The Technical Submission file contents must not contain any reference to the bid price being offered for this project.
  - 11.2.4.** The email subject line or body must identify the name of the proponent/company and the RFP name and number.
  - 11.2.5.** Proponents shall be solely responsible for the delivery of their proposals in the manner and time prescribed.



**11.3. Technical Submission Contents**

**11.3.1.** Technical submissions shall be submitted in a legible format, not to exceed 20 pages. Submissions will be on the proponent’s letterhead and shall contain an authorized signature. Proposals shall be submitted in English, and shall be specifically prepared to meet the requirements of this project.

Total RFP Scoring:

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

The technical submission response shall be organized into four sections:

<b>Section I.</b>	<b>Project Experience and References</b>
<b>Section II.</b>	<b>Team Composition</b>
<b>Section III.</b>	<b>Management of Project Specific Risk</b>
<b>Section IV.</b>	<b>Schedule of Work</b>

**I. PROJECT EXPERIENCE AND REFERENCES.**

The proponent is required to provide a detailed summary of their company’s experience within the past sixty (60) months, by describing three (3) Roof Replacement projects and Envelope/Door Rehabilitation projects for an educational/commercial institution.

These projects should be within a 100 km radius of the Halifax Regional Municipality. These projects should be similar in nature, complexity and value to the requirements specified in this RFP (see Section 00 00 15).

**If a proponent has completed projects for the HRCE, they are required to include the two most recent HRCE projects in this section (regardless of the**

**date completed).** It is the bidder's responsibility to source HRCE project information requested in this section.

Please note if the proponent fails to include relevant HRCE projects, this will negatively impact their technical score. **If a proponent has not completed prior work (at any time) for the HRCE, then they may select projects of their choosing within the other stipulated parameters.**

> For each of the three projects listed, the proponent is asked to provide:

- 1) the company name,
- 2) a brief description of the project,
- 3) the name of the project manager,
- 4) the dollar value of the project.
- 5) A reference contact name and title for this project, and
- 6) their email and phone number.

For HRCE projects, please provide the HRCE Project Manager's name; prior consent is not required.

Please ensure that non-HRCE references are aware they will be contacted, and that prior consent to be a reference was obtained.

RFP Scoring for this section:

<b>SECTION I. PROJECT EXPERIENCE, BASED ON REFERENCE FEEDBACK</b>		
<b>Project 1</b>	Project met budget and schedule.	<b>2.00</b>
	Good quality work and product.	<b>1.00</b>
	Well managed project and good communications.	<b>2.00</b>
<b>Total Points Available for this Project</b>		<b>5.00</b>
<b>Project 2</b>	Project met budget and schedule.	<b>2.00</b>
	Good quality work and product.	<b>1.00</b>
	Well managed project and good communications.	<b>2.00</b>
<b>Total Points Available for this Project</b>		<b>5.00</b>
<b>Project 3</b>	Project met budget and schedule.	<b>2.00</b>
	Good quality work and product.	<b>1.00</b>
	Well managed project and good communications.	<b>2.00</b>
<b>Total Points Available for this Project</b>		<b>5.00</b>
<b>Total Points Available for Section I.</b>		<b>15.00</b>

**II. TEAM COMPOSITION.**

The proponent is required to identify the key personnel who will be assigned to this project, these key personnel must remain with the project until completion. Please provide each employee’s name, title/role, and years of related experience.

Proponents are required to provide a detailed resume for the proposed Project Manager outlining professional qualifications and years of experience.

Please indicate the percentage of their time that will be committed to this project.

An ***example*** of a time commitment for this project could be:

<b>Commitment</b>	<b>Key Personnel</b>
<b>100%</b>	<b>Foreman</b>
<b>50%</b>	<b>Site Supervisor</b>
<b>20%</b>	<b>Project Manager</b>

RFP Scoring for this section is:

<b>SECTION II. TEAM COMPOSITION</b>	<b>Score</b>
<b>Does the Project Manager have a minimum of 3 years of relevant experience?</b>	<b>2.00</b>
<b>Was a listing of key team members provided?</b>	<b>1.00</b>
<b>Was the percentage of commitment indicated and adequate?</b>	<b>2.00</b>
<b>Total Points Available for Section II.</b>	<b>5.00</b>

**III. MANAGEMENT OF PROJECT SPECIFIC RISK**

Proponents shall identify a minimum of three (3) risks associated with this specific project. Risks that their company could be faced with related to the scope of work for this project. Proponents shall state the risk, risk mitigation strategy, responsible parties, and the impact to schedule or budget.

An example of a Project Specific Risk could be:

<b>Risk Register Example</b>			
<b>Risk</b>	<b>Mitigation</b>	<b>Responsibility</b>	<b>Impact</b>
Specified materials have long lead times.	1. Expedite delivery if available. 2. Source alternative equivalent materials that are readily available.	Contractor. Client and Consultant approval required.	Expedited delivery or alternative materials may increase cost and impact budget. Without mitigation the schedule will be impacted.

***Standard safety risks covered by Safe Work Practices are not to be referenced here. The HRCE is looking for assurances that risks identified through the mandatory site meeting are identified and will be mitigated, and that potential delays or other risks are disclosed in the proposal.***

RFP Scoring for this section is:

<b>SECTION III. MANAGEMENT OF RISKS ASSOCIATED WITH THIS SPECIFIC PROJECT</b>	<b>Score</b>
<b>Did the proponent detail the 3 Project Specific Risks with mitigation strategies?</b>	<b>3.00</b>
<b>Are risk management responsibilities clearly identified and assigned?</b>	<b>1.00</b>
<b>Were appropriate risk impacts provided for the 3 stated risks?</b>	<b>1.00</b>
<b>Total Points Available for Section III.</b>	<b>5.00</b>

**IV. SCHEDULE OF WORK**

Please provide a Gantt Chart that includes an appropriate amount of detail around the planning and scheduling needs for this project. The Gantt Chart should contain all the key activities and align with the work schedule. A successfully prepared Gantt Chart provides a clear visual representation of how the project and required tasks will be completed.

***If the Ready for Takeover Date cannot be met, please communicate this to procurement as an RFI well before RFP close.***

*The HRCE expects to award this work within 15 days of close. Please ensure that the proposed schedule of work aligns with that timeframe.*

RFP Scoring for this section is:

SECTION IV. SCHEDULE OF WORK	Score
Does the Gantt Chart include all required components? Is the schedule reasonable?	2.00
Does the schedule indicate project completion <b><i>before</i></b> the Ready for Takeover date? <i>If the Ready for Takeover date cannot be met, please submit a RFI prior to RFP close.</i>	3.00
<b>Total Points Available for Section IV.</b>	<b>5.00</b>

**11.4. Price Submission Contents**

**11.4.1** The Price Submission is to be submitted on the forms provided by the HRCE (Section 00 41 13 – Price Submission Form). These forms are to be completed in full, with an authorized signature and corporate seal as applicable. The completed form shall be without interlineations, alterations or erasures.

Proponents are advised that the HRCE may request original documents be sent to the HRCE office for further review. Price submissions sent by fax, mail or hand delivered will not be accepted.

**11.4.2** The pricing details are to be clearly indicated. The total contract price in both numbers (dollars and cents) and written words must be entered. Should there be a discrepancy between the two, the written words shall prevail.

**11.4.1.** The executed pricing offer is to be submitted on the forms **together with a scanned copy of the required bid security** by email.

**11.4.2.** Improperly completed information, and/or irregularities in the bid security, may be cause to declare the submission non-compliant.

*The omission of bid security from the bid submission will result in the submission being deemed as non-compliant (Refer Section 14.1.10).*

**11.5. Proposal Evaluation**

**11.5.1. Evaluation Process** – Compliant proposals will be evaluated, first during Phase A, and those meeting the minimum qualifying score under Phase A will then be evaluated in Phase B, with a final score determined in Phase C.

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

**11.5.2.** Proposals that do not meet the minimum qualifying score for Phase A will not be given further consideration.

**11.5.3.** Proposals will be evaluated and scored by an evaluation team comprised of a minimum of three (3) representatives of the HRCE. The degree to which a proposal meets the proposal requirements will be determined at the sole discretion of the HRCE evaluation team.

**11.5.4. Phase A – Technical Submission** – The Technical Submission for compliant proposals will be evaluated using the evaluation criteria set out in the table below. Scores will be recorded for each criterion (rounded to two (2) decimal points) and a total qualifying score will be determined.

Refer 11.3.1	Phase A - Evaluation Criteria Technical Submission	Score
Section I.	Project Experience and References	15.00
Section II.	Team Composition	5.00
Section III.	Management of Project Specific Risks	5.00
Section IV.	Schedule of Work	5.00
<b>Total Phase A - Potential total score - Technical Submission</b>		<b>30.00</b>
<b>Minimum score needed to pass technical</b>		<b>15.00</b>

***A minimum qualifying score of 15.00 points is required in Phase A for the proposal to be given further consideration.***

All technical submissions that have met the minimum qualifying score will proceed to Phase B - Price Submission.

Technical submissions that score below the minimum qualifying score will not proceed further in the RFP evaluation process.



**11.5.5. Phase B - Price Submission** - Price Submission files for proponents whose Technical Submission have received fifteen (15.00) points or greater will be opened.

**The Price Submission will have a weight of seventy (70.00) points.**

Price submissions will be evaluated, and a Phase B score will be assigned to each proponent by using a proximity to lowest price method. In this method, proponents will be awarded points based on how close their total price submitted compares with the lowest cost of all total submissions.

**Price Submissions will be Evaluated based on the Proponent’s Lump Sum Price.**

For example:

Formula: Price Score = % value of score x (Low bid ÷ Your bid)

Example for calculation: Bid Pricing Received

Company P	Company Q	Company R	Company S	Company T
\$115,000	\$135,000	\$185,000	\$165,000	\$180,000

**Calculation of Pricing Score for Company S:**

Phase B Score = 70 points x (\$115,000 ÷ \$165,000) = 48.79 points

**The Total Score (Phase C) will be calculated by adding together Phase A + Phase B scores.**

**11.5.6.** The proponent who has the highest **TOTAL SCORE** (Phase C calculation), will be deemed to be the successful proponent, subject to other provisions herein, including Section 16.5.

Phase A – Technical Score	30 Points
Phase B – Pricing Score	70 Points
Phase C - Total RFP Score	100 Points

## 12. Conditions of the RFP Process

**12.1.** Proponents shall take full cognizance of content of all Contract Documents in preparation of their proposal. Section 00 41 13 – Price Submission Form, Subsection 5.0 references a complete list of Contract Documents.

### **13. Amendment or Withdrawal of Proposals**

- 13.1.** Proposal packages may be **withdrawn** from the RFP process in writing by email notification sent to the submission email address, prior to date and time of closing.
- 13.2.** As previously stated in Section 00 21 13, item 1.6 - Amendments to the submitted offer will be permitted if received by email prior to the RFP closing time and if endorsed by the same party or parties who signed and executed the offer. If the amendment relates to the technical submission, it must be labeled "Technical Submission Amendment" along with the RFP number of the project and the company name. If the amendment relates to the price submission, it must be labeled "Price Submission Amendment" along with the RFP number of the project and the company name. The price amendment file must include the signed "Price Amendment Form" (Section 00 41 73).
- 13.3.** A single page Price Amendment Form is provided immediately following the Price Submission Forms (Section 00 41 73).
  - 13.3.1.1.** The Price Amendment Form provided is the standard master form for submission of any price amendments for this project.
  - 13.3.1.2.** The Price Amendment Form must be copied and completed, as directed, for any price amendments submitted.
- 13.4.** Price amendments shall not disclose either original or revised total price.

### **14. Proposal Ineligibility (Reason for Rejection)**

- 14.1.** HRCE may reject a proposal which has been received prior to the closing time where:
  - 14.1.1.** The two file (electronic) system (Technical Submission and Price Submission) is not followed.
  - 14.1.2.** The price submission is not submitted on the required forms (Section 00 41 13) included herein.
  - 14.1.3.** The proposal is submitted by facsimile or regular mail or hand delivery.
  - 14.1.4.** There are omissions of information that the HRCE in its sole discretion deems to be significant.
  - 14.1.5.** The technical submission or price submission form is not signed as required.
  - 14.1.6.** The proposal has conditions attached which are not authorized by the invitation to bid.
  - 14.1.7.** The proposal fails to meet one or more standards specified in the invitation to bid.
  - 14.1.8.** All addenda have not been acknowledged.
  - 14.1.9.** Any other defect which, in the opinion of the HRCE brings the meaning of the proposal into question.

**14.1.10.** The required bid security is not provided within the Price Submission file.

**14.1.11.** Proponent failed to attend bidders' mandatory site meeting.

**14.1.12.** Proponent failed to list relevant HRCE project(s) in their Technical submission.

## **15. Communications Affecting Bids**

**15.1.** Transmissions, including, but not limited to facsimile transmission:

**15.1.1.** The technical submission or price submission forms submitted by mail, fax or courier will not be accepted.

## **16. Right to Accept or Reject any Proposal**

**16.1.** The HRCE reserves the right to reject any proposal in its sole and absolute discretion for any reason whatsoever and the HRCE will not necessarily accept the lowest bid.

**16.2.** The HRCE specifically reserves the right to reject all proposals if none are considered to be satisfactory in the HRCE's sole and absolute discretion and, in that event, at its option, to call for additional proposals.

**16.3.** Without limiting the generality of any other provision herein, the HRCE reserves the right to accept or reject any proposal in accordance with item #14 above (Proposal Ineligibility).

**16.4.** Notwithstanding the above, the HRCE shall be entitled, in its sole and absolute discretion, to waive any irregularity, informality or non-conformance with these instructions in any proposal received by the HRCE. The HRCE reserves the right to reject any or all proposals, or to accept any proposal, or portion thereof, deemed in its best interest.

**16.5.** In the event that more than one proponent achieves an identical final total score within two decimal places in Phase C, the HRCE will flip a coin to determine the successful contractor.

**16.6.** No term or condition shall be implied, based upon any industry or trade practice or custom or in a practice or policy of the HRCE or otherwise, which is inconsistent or conflicts with the provisions contained in these instructions.

## **17. Right to Cancel Competition/No Award**

**17.1.** Issuing a RFP/RFT implies no obligation on HRCE to accept any submission, or a portion of any submission. The lowest or any RFP/RFT submission will not necessarily be accepted.

**17.2.** Without limiting the generality of the foregoing, an RFP/RFT may be cancelled in whole or in part by HRCE in its sole discretion, whether before or after the time for RFP/RFT submissions has closed, when:

**17.2.1.** The RFP/RFT submission price exceeds the funds allocated for the purchase;

**17.2.2.** There has been a material change in the procurement requirements after the RFP/RFT has been issued;

**17.2.3.** Information has been received by HRCE after issuance of the RFP/RFT that HRCE believes has materially altered the procurement or the need of HRCE for the procurement; or

**17.2.4.** There was insufficient competition in order to provide the level of service, quality of goods or pricing required.

**17.3.** If no compliant RFP/RFT submission is received in response to an RFP/RFT, the HRCE reserves the right to enter into negotiations with one or more suppliers in order to complete the procurement or to reject all Bids and re-issue the RFP/RFT on new or modified RFP/RFT Documents.

**17.4.** HRCE will be the sole judge of whether there is sufficient justification to cancel any RFP/RFT.

**17.5.** No action or liability will lie or reside against HRCE in its exercise of its rights under this section

## **18. Construction Contract Guidelines**

**18.1.** The printed policies of the Nova Scotia Construction Guidelines dated May 18, 2006 (or latest revisions) are applicable to these RFP documents.

## **19. Submission and Security Forms – Signatures**

**19.1.** All Price Submission forms, bid security forms and performance assurance forms **must** bear the Bidder's original signature and name HRCE as the insured.

## **20. Bid Security**

**20.1.** Proponents must submit within the sealed Price Submission file, one of the following: bid security in the form of a certified cheque, Irrevocable Letter of Credit, or Bid Bond on CCDC Form 220, in the amount of ten percent (10%) of the Bid Price made payable to or naming HRCE (as obligee). This bid security **must** accompany the Price Submission as an electronic file. HRCE will request an original hard copy from the successful proponent as required.

**20.2.** Where bid bond is provided as bid security:

**20.2.1.** The bond must be provided on the standard CCDC Bid Bond Form (latest version) in the amount of not less than ten percent (10%) of the Bid Price.

**20.2.2.** The bond must be submitted by the general contractor bidder, signed and sealed by the principal (Contractor) and Surety and shall be with an established Surety Company satisfactory to and approved by the HRCE.

**20.2.3.** The cost of providing the Bid Bond must be included in the Bid Price.

**20.2.4.** A legible scanned copy of the bid bond or an electronic bid bond shall be submitted with the bid via email. If requested by the HRCE, the vendor will provide the original bid bond without delay.

**20.3.** Where a certified cheque or a bank draft is provided as bid security:

**20.3.1.** The certified cheque or bank draft must be endorsed in the name of HRCE, for a sum not less than ten percent (10%) of the amount of the Bid Price.

**20.3.2.** The cost of providing the certified cheque or bank draft must be included in the Bid Price.

**20.4.** Where the Irrevocable Standby Letter of Credit is used as bid security:

**20.4.1.** The letter must be endorsed in the name of HRCE, for a sum not less than ten percent (10%) of the Bid Price

**20.4.2.** The Irrevocable Standby Letter of Credit shall be issued by a certified financial institution subject to the Uniform Custom and Practices for Documentary Credit (1993 revision or latest revision), International Chamber of Commerce (Publication No. 500).

**20.4.3.** The cost of providing the letter must be included in the Bid Price.

**20.4.4.** **A legible scanned copy of the bid bond or an electronic bid bond can be submitted with the bid via email. If requested by the HRCE, the vendor is required to provide the original bid bond without delay.**

**20.5.** Return of Bid Security:

**20.5.1.** The bid security of the unsuccessful proposers will be returned to them after the contract has been signed, or previous to such time, at the discretion of HRCE.

**20.5.2.** If no contract is awarded, all bid security will be returned.

## **21. Contract Security (Performance Assurance) – Required for contracts valued over \$100,000**

**21.1.** The performance assurance forms must bear the bidder's original signature and name HRCE as the insured.

**21.2.** The successful contractor shall maintain performance assurance in force for a period of not less than twelve (12) months after Ready-for-Takeover is achieved.

**21.3.** Performance Assurance must be endorsed as specified for bid security.

**21.4.** Should it become apparent that the final cost of the project will exceed the total amount payable by more than 20%, the bidder shall arrange to have their bonds reissued based on the projected final cost.

- 21.5.** Section 00 72 13 – General Conditions GC11.2 and Section 00 73 00 – Supplementary General Conditions for form of Contract Security. Proponents should reference the project documents for the amount of Contract Security and the alternate type of Contract Security if applicable.
- 21.6.** Performance Assurance must be submitted as one of the following:
- 21.6.1.** Where a Bid Bond was used as bid security:
- 21.6.1.1.** Within ten (10) days after notification of award of the Contract, the successful contractor must provide a Performance Bond and a Labour & Material Payment Bond, each in an amount equal to fifty percent (50%) of the amount of the Contract, naming HRCE.
- 21.6.1.2.** Performance Bond and Labour and Material Payment Bonds, submitted by the bidders, shall be provided at the expense of the bidder and shall be with an established Surety Company satisfactory to and approved by the HRCE.
- 21.6.2.** Where a certified cheque or bank draft is used as Contract Security:
- 21.6.2.1.** The certified cheque or bank draft submitted during the bid period will be cashed and the amount retained by the HRCE shall serve as Performance Assurance, including the payment of all obligations arising under the Contract.
- 21.6.2.2.** The value of the certified cheque or bank draft will be retained in lieu of the Performance Bond and Labour and Material Bonds, providing that, at Contract award, the successful contractor shall supplement their certified cheque or bank draft to maintain an amount of ten (10%) of the total amount payable (Contract Price plus HST) under the contract.
- 21.6.2.3.** The amount remaining will be returned without interest after a period of not less than twelve (12) months after Ready-for-Takeover is achieved.
- 21.6.2.4.** Where certified cheque or bank draft is used as Performance Assurance, the cost of providing the certified cheque or bank draft in the Contract price.
- 21.6.3.** Where an Irrevocable Standby Letter or Credit is used as Contract Security:
- 21.6.3.1.** The Irrevocable Standby Letter of Credit submitted during the bid period will be retained by the HRCE and shall serve as performance assurance, including the payment of all obligations arising under the contract. The Irrevocable Standby Letter of Credit shall be issued by a certified financial institution subject to the Uniform Customs and

Practices for Documentary Credit (1993 revision) International Chamber of Commerce (Publication No. 500).

- 21.6.3.2.** Where an Irrevocable Standby Letter of Credit is used as Performance Assurance, the cost of providing this letter should be included in the Contract Price. The contractor shall provide to the HRCE documentation throughout the duration of the contract that the Irrevocable Standby Letter of Credit remains in full effect at all times as specified.
- 21.6.3.3.** Upon expiry of the Irrevocable Standby Letter of Credit, a separate Irrevocable Standby Letter of Credit shall be provided for work requiring extended warranties for such amounts as are required by the contract.
- 21.6.3.4.** The Irrevocable Standby Letter of Credit is to be in effect for a period of not less than twelve (12) months after the Ready-for-Takeover is achieved.

## 22. Insurance

- 22.1.** Proponents shall refer to project documents for the amount of insurance, the duration of coverage and alternate type of insurance; if applicable.

Section 00 72 13 -General Conditions of Contract,  
Section GC 11.1 – Insurance, and  
Section 00 73 00 – Supplementary General Conditions for form of Insurance.

- 22.2.** The contractor shall carry such insurance as is required to protect the contractor, any sub-contractor, the HRCE, their agents and employees from all claims which may arise from the operations under this contract. The amounts of such insurance shall not be less than 22.3 below.
- 22.3.** The General Contractor shall secure and maintain, at its expense, during the term of the insurance:
  - 22.3.1.** Wrap-Up Liability insurance must insure the general contractor(s) and all sub-contractors on this project:
    - 22.3.1.1.** including but not limited to, products liability and completed operations, contractual liability, owners and contractors' liability, attached

machinery extension endorsement, and independent contractor, for a combined single limit of no less than \$5,000,000 (five million dollars) per occurrence.

- 22.3.1.2.** Wrap-Up Liability insurance is to include 24 months (2 years) of completed operations.
- 22.3.2.** Commercial Auto Liability insurance covering all owned, non-owned and hired vehicles for a minimum combined single coverage of \$2,000,000 (two million dollars) per occurrence.
- 22.3.3.** Builders Risk: All risks in the amount of the contract Stipulated Bid Price. Insurance requirements as stipulated in the CCDC 2-2020.
- 22.3.4.** Workers' Compensation to meet statutory requirements and/or Employers Liability, with limits of not less than \$2,000,000 (two million dollars).
- 22.3.5.** Contractors Pollution Liability Insurance limits of not less than \$2,000,000 (two million dollars) per occurrence
- 22.4.** Primary Insurance: The Contractor agrees that the insurance as required shall be primary and non-contributory.
- 22.5.** No Limitation: The Contractor is responsible for determining whether the minimum insurance coverage amounts contained in this RFP are adequate to protect its interests. These minimum coverage amounts do not constitute limitations upon Supplier's Liability.
- 22.6.** Endorsements – For the policies in item 22.3 above, there shall contain an endorsement naming the Halifax Regional Centre for Education and its affiliates as Additional Insured, and eliminating and removing any exclusion of liability for:

  - 22.6.1.** injury, including bodily injury and death to an employee of the insured or of the Halifax Regional Centre for Education, or
  - 22.6.2.** any obligation of the insured to indemnify, hold harmless, defend, or otherwise make contribution to the Halifax Regional Centre for Education because of damage arising out of injury, including bodily injury and death, to an employee of Halifax Regional Centre for Education.



- 22.7.** The Contractor shall provide a certificate of insurance evidencing the above prior to work being performed. The HRCE also requires a complete copy of the Builder's Risk and Wrap-Up Liability policies, in addition to the Certificate of Liability Insurance.
- 22.8.** Furthermore, HRCE must receive, in writing, at least thirty (30) days' notice of cancellation or modification of the above insurances. All insurance policies or certification documents shall specify coverage being applicable to this contract. The Contractor shall not do or omit to do or suffer anything to be done or omitted to be done which will in any way impair or invalidate such policy or policies of insurance.
- 22.9.** Insurance documents (certificate and policies) shall be provided to the Purchasing Department within the timeframe indicated on the award letter. These documents are required before a purchase order will be issued. Work is not authorized and shall not commence until receipt of the purchase order.

### **23. Proof of Competency of Proponent**

- 23.1.** Any bidder may be required to furnish evidence satisfactory to the owner that he and his proposed sub-contractors have sufficient means and experience in the types of work called for to assure completion of the contract in a satisfactory manner.
- 23.1.1.** The successful contractor must be a member in good standing with CRCA, RCANS or NBRCA; and Nova Scotia Construction Safety Association or approved recognized association or program.

#### **23.2. Proposal Signing**

- 23.2.1.** The Technical Submission and the Price Submission form must be signed and under seal (as applicable) by a duly authorized signing officer(s) in their normal signatures.

#### **23.3. Contract Time**

- 23.3.1.** The bidder, in submitting an offer, agrees to achieve Ready-for-Takeover of the work by the date indicated in the contract documents.

### **24. Offer Acceptance / Rejection**

#### **24.1. Duration of offer**

- 24.1.1.** Proposals shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the RFP closing date.

#### **24.2. Award/Selection/Acceptance of Offer**

**24.2.1.** In the evaluation of a proposal, HRCE will consider, but not be limited to, the following criteria:

**24.2.1.1.** Compliance with proposal requirements

**24.2.1.2.** Proposal Evaluation Criteria as stated in Section 11.5

**24.2.2.** The Owner's evaluation of any and all proposals will be final

**24.3.** After acceptance by HRCE, the successful bidder shall be notified in writing of acceptance of the bid by way of an award letter.

## **25. Agreement**

**25.1.** After acceptance, the HRCE and the successful proponent will enter into a CCDC-2, standard form of contract for the execution of the work.

**25.2.** A purchase order will be issued to the successful bidder once the contract has been signed and executed.

## **26. Post Award Submissions**

**26.1.** Upon receipt of the award letter, the successful contractor will provide the following documents within five (05) business days:

**26.1.1.** A current Certificate of Recognition or Letter of Good Standing - The Contractor will supply a Certificate of Recognition issued jointly by the Workers' Compensation Board of Nova Scotia and an occupational health and safety organization approved by the Workers' Compensation Board of Nova Scotia (such as the Nova Scotia Construction Safety Association). These approved organizations are currently listed on the Workers' Compensation Board of Nova Scotia website ([www.wcb.ns.ca](http://www.wcb.ns.ca)). The contractor shall remain in good standing for the duration of the contract.

The Contractor shall supply the following:

**26.1.1.1.** Worker's Compensation Coverage – The Contractor shall supply a clearance letter from the Worker's Compensation Board of Nova Scotia, indicating the Contractor is assessed and in good standing;

**26.1.1.2.** Certificates of good standing with CRCA (Canadian Roofing Contractors Association) and RCANS (Roofing Contractors Association of Nova Scotia);

**26.1.1.3.** All required contract security and insurance documentation;

**26.1.1.4.** A completed Schedule of Values (see Section 01 37 00);

**26.1.1.5.** A completed Safety Plan; and,

**26.1.1.6.** A detailed listing of subcontractors to be used.

- 26.1.2.** In the event that any such certification during the term of the contract expires, the obligation remains with the Contractor to provide the updated required certificates.
- 26.1.2.1.** The Contractor and subcontractors (if applicable) shall remain in good standing for the duration of the contract.

## **27. Taxes**

- 27.1.** The General Conditions of the Contract state that the Contractor is to pay all Harmonized Sales Tax (HST).
- 27.2.** The HRCE is not exempt from HST. As a result, the aggregate amount of the bid for contracts is subject to HST; however, **prices submitted shall not include HST.**
- 27.3.** The HST payable by the HRCE will be added as a separate item during the processing of progress payments and therefore **HST will not appear as a cost in the aggregate amount of the bid amount.**
- 27.4.** Proponents are advised that they may be eligible to claim an Input Tax Credit (ITC) for a portion of the HST paid in relation to the contract requirement of the Government of Canada.
- 27.5.** Proponents are to note that prices indicated on the Price Submission Form and the amendments to the Price Submission Form shall not include Provincial Sales Taxes, the Federal Goods and Services Tax or the Harmonized Sales Tax.
- 27.6.** Refer to CCDC-2 (Section 00 72 13) and Supplementary General Conditions (Section 00 73 00).

## **28. Proponent Debriefing**

- 28.1.** HRCE will, if requested by a proponent within fifteen (15) days of notice of RFP award, arrange a debriefing for the purpose of informing the bidder why their proposal was not selected. At least two (2) HRCE staff shall attend the de-briefing.

The purpose of the de-briefing will be to discuss the proponent's scoring, answer questions and identify any weak areas in the proponent's submission in order for the proponent to improve future bid submissions. HRCE will not divulge details contained in any proponent's proposal with other proponents or overall ranking.

## **29. Purchase Orders**

- 29.1.** The purchase order will be issued by the HRCE Purchasing Department once the CCDC-2 Contract Documents have been fully executed by all parties.

**30. Invoices**

- 30.1.** The purchase order number and HST number shall be noted on any/all invoices related to all work performed under this contract.
  
- 30.2.** Applications for progress payments should be submitted to HRCE's consultant and cc'd to [operations-invoices@hrce.ca](mailto:operations-invoices@hrce.ca) as well as HRCE's Project Manager (Operations Contact) identified on the RFP cover page.

**END OF SECTION 00 21 13**

**SECTION 00 41 13 – PRICE SUBMISSION FORM**

**1. Salutation:**

**To: HALIFAX REGIONAL CENTRE FOR EDUCATION  
33 SPECTACLE LAKE DRIVE, DARTMOUTH, NS B3B 1X7  
ATTN: NANCY RIDEOUT, PURCHASING MANAGER**

**For: #4238 Roof Replacement and Localized Envelope Repairs**

Organization Name:	
Street Address:	
Email Address:	
Telephone:	
Authorized Signing Authority:	
Position Title:	

**2. Proponent Declares:**

- 2.1.** That this submission was made without collusion or fraud.
- 2.2.** That the proposed work was carefully examined.
- 2.3.** That the Proponent is familiar with local conditions.
- 2.4.** That Contract Documents and Addenda were carefully examined.
- 2.5.** That all the above were taken into consideration in preparation of this RFP.

**3. Proponent Agrees:**

- 3.1.** To provide all necessary equipment, tools, labour, incidentals and other means of construction to do all the work and furnish all the materials of the specified requirements which are necessary to complete the work in accordance with the Contract and agrees to accept, therefore, as payment in full the Lump Sum Price stated in Subsection 6 hereunder.

- 3.2. The have carefully examined the site of the work described herein; have become familiar with local conditions and the character and the extent of the work; have carefully examined every part of the proposed Contract and thoroughly understand its stipulations, requirements and provisions.
- 3.3. The have determined the quality and quantity of materials required; have investigated the location and determined the source of supply of the materials required; have investigated labour conditions; and have arranged for the continuous prosecution of the work herein described.
- 3.4. To be bound by the award of the Contract and if awarded the Contract on this bid price, to execute the required contract within ten (10) days after notice of award.
- 3.5. They have noted that the Harmonized Sales Tax is excluded from the "Contract Price".
- 3.6. The Contractor's employees shall always report to the main office of a school, indicate who they are, and state their purpose on site prior to starting any work in the school.
- 3.7. ***To the hours of work, defined as: Work for the HRCE is to be completed during hours when schools are unoccupied, unless otherwise authorized in writing by the Project Manager (Operations Contact person) or designate. Hours of work shall comply with local ordinances and bylaws for each site.***
  - 3.7.1. No work shall be conducted on weekends or statutory holidays without specific written approval from the Operations Manager or designate.
  - 3.7.2. In the event that work is requested by HRCE during hours when schools are occupied, the work will be limited to work that is not disruptive to the school. There shall be no mechanical removals, no drilling, screwing or torch work during occupied hours without prior written approval from HRCE.

#### 4. Owner Agrees

- 4.1. To examine this proposal and in consideration, therefore, the proponent hereby agrees not to revoke this bid:
  - 4.1.1. until some other proponent has entered into the Contract with the HRCE for the performance of the work and the supply of the materials specified in the notice inviting proposals; or in the Information to Proponents, or
  - 4.1.2. until ninety (90) days after the time fixed in the Information to Proponents for receiving bids has expired, or
  - 4.1.3. Whichever first occurs; provided, however, that the Proponent may revoke this proposal at any time before the time fixed as indicated in the section 00 21 13, item 13.1.

**5. Contract Documents include:**

The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the Contract Documents.

The HRCE Supplementary General Conditions for the CCDC-2, 2020 application to this Work is available for review under Section 0073 00 of the RFP document.

- 5.1.1. Cover Page
- 5.1.2. Table of Contents – Section 00 00 10
- 5.1.3. Description of Work & List of Drawings – Section 00 00 15
- 5.1.4. List of Consultants – Section 00 05 00
- 5.1.5. Information for Proponents – Section 00 21 13
- 5.1.6. Price Submission Form – Section 00 41 13
- 5.1.7. Price Amendment Form (if applicable) – Section 00 41 73
- 5.1.8. Agreement Between Owner and Contractor (CCDC 2) – Section 00 52 00
- 5.1.9. Definitions (CCDC 2) – Section 00 52 13
- 5.1.10. General Conditions of the Stipulated Contract Price (CCDC 2) – Section 00 72 13
- 5.1.11. Supplementary General Conditions – Section 00 73 00
- 5.1.12. Specifications of Work (all applicable sections)
- 5.1.13. Drawing(s) – as applicable
- 5.1.14. Addenda issued by HRCE
- 5.1.15. Post Bid Addenda issued by the HRCE, where applicable.
- 5.1.16. Executed Contract

**6. Price Submission - Contract Price:**

- 6.1. The undersigned Proponent, having carefully read and examined the aforementioned Contract Documents prepared by the Consultant, for the Halifax Regional Centre for Education, hereby accepts the same as part and parcel of the Contract herein referred to, and having carefully examined the locality and site of works and having full knowledge of the work required and of the materials to be furnished and used, does hereby propose and offer to enter into a contract to perform and complete, the whole of the said works and provide all necessary labour, plant, tools, materials and equipment and pay all applicable taxes, as set forth and in strict accordance with the Specifications, Drawings and other Contract Documents and to do all therein called for on the terms and conditions and under the provisions therein set forth for the following:

6.2 LUMP SUM PRICE

**#4238 Roof Replacement and Localized Repairs – Rockingstone Heights School**

TOTAL: \_\_\_\_\_ /100 Dollars (\$ \_\_\_\_\_ )  
(HST Excluded)

*Contract Price to be completed in written form on the lines provided above, with cents expressed as numerical fraction of a dollar. Contract price to be completed in numerical form on the line bounded by parenthesis above, with cents expressed as a decimal of a dollar.*

Price Submissions will be Evaluated based on the Proponent’s Lump Sum Price.

**WHERE THERE IS A CONFLICT, WRITTEN WORD WILL GOVERN.**

**Award will be subject to Budget Availability.**

The HRCE reserves the Right to:

**Award to one or more contractors who bid.**

**Accept bids on any or all sections of this work.**

**Reduce the Scope of Work if the Bid amount Exceeds the Available Budget.**

6.3 INDIVIDUAL PRICE – EACH ELEVATION

The lump sum price provided in Section 6.2 represents the total price to complete this roof project in its entirety. The HRCE acknowledges that there are inherent costs savings and economies of scale achieved when awarding all sections to a single bidder.

In the event that partial award is required, please provide pricing per each individual section as listed below. Each price is to include all management costs (administration, mobilization, etc.) as required to perform the entirety of the work for that specific elevation. The HRCE acknowledges that management costs are higher on a per section basis, compared to management costs associated with all sections priced as one lump sum.

The expectation is that the pricing provided below represents the entire price to complete that specific section/elevation, should it be the only section awarded. The pricing provided here will not be used in the calculation of the RFP scoring, see Section 6.2 Lump Sum Price.



**Roof Replacement Work for Roof Area 1.1 (ROOF C)**

\_\_\_\_\_ /100 Dollars (\$\_\_\_\_\_ )  
(HST Excluded)

**Roof Replacement Work for Roof Area 2.1 (ROOF B)**

\_\_\_\_\_ /100 Dollars (\$\_\_\_\_\_ )  
(HST Excluded)

**Roof Replacement Work for Roof Area 2.2 (ROOF A)**

\_\_\_\_\_ /100 Dollars (\$\_\_\_\_\_ )  
(HST Excluded)

**Wall Rehabilitation, New Door, New Ladder**

\_\_\_\_\_ /100 Dollars (\$\_\_\_\_\_ )  
(HST Excluded)



**Signature** \* The undersigned Proponent declares that this bid is made without connection to any other person(s) submitting pricing for the same work and is in all respects fair and without collusion or fraud.

**#4238 Roof Replacement and Localized Repairs – Rockingstone Heights School**

**SIGNATURE:**

SIGNED AND DELIVERED  
in the presence of:

\_\_\_\_\_  
Witness

**CONTRACTOR**

\_\_\_\_\_  
Company name

\_\_\_\_\_  
Signature of Signing Officer

\_\_\_\_\_  
Name and Title (printed)

\_\_\_\_\_  
Date

**9. Acknowledgement of Student Safety**

The Halifax Regional Centre for Education (HRCE) is directly responsible for the safety of its students and staff. Should contractors be required to work in or on school property while children are present, it is a **mandatory HRCE requirement** that contractors assign the work to employees and/or sub-contractors who do not have a criminal record and who are not listed on the Child Abuse Registry. Failure to comply with this requirement may result in immediate contract termination.

The HRCE reserves the right to demand, at any time, during the full term of the project a Criminal Record Check and/or a Child Abuse Registry Check, on any personnel authorized by the Contractor to be on HRCE work/school sites.

**By signing below, you are confirming that you understand and will abide by this mandatory HRCE requirement.**

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Company name

\_\_\_\_\_  
Signature of Signing Officer

\_\_\_\_\_  
Name and Title (printed)

\_\_\_\_\_  
Date

**END OF SECTION 00 41 13**

**SECTION 00 41 73 - PRICE AMENDMENT FORM**  
**#4238 Roof Replacement and Localized Repairs**  
**Rockingstone Heights School**

**Note:** to be completed and forwarded for each Price amendment prior to RFP closing time and date as detailed on the cover sheet of the RFP document and any applicable addenda.

**Lump Sum Price Amendment – Section 00 41 13 Price Submission form, Article 6.1. Contract Price**

Increase Price by		Decrease Price By	
Amount (excluding HST)	\$	Amount (excluding HST)	\$

**It is the Proponent's responsibility to ensure the table above is legible.**

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**Submitted by:**

---

**Company Name** (please print as it appears on original RFP file)

---

**Authorized Proponent's Name** (please print as it appears on Price Submission Form)

---

**Authorized Proponent's Signature**

---

**Date**

---

**END OF SECTION 00 41 73**

**SECTION 00 52 00 - AGREEMENT BETWEEN OWNER AND CONTRACTOR**  
*CCDC 2 – 2020*

(A copy of Section 00 52 00, Standard Construction Contract CCDC 2 – 2020 (5 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 52 00

**SECTION 00 52 13 - DEFINITIONS**  
*CCDC 2 - 2020*

(A copy of section 00 52 13, Standard Construction Contract CCDC 2 – 2020 (2 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 52 13

**SECTION 00 72 13 - GENERAL CONDITIONS**  
*OF THE STIPULATED PRICE CONTRACT*  
*CCDC 2 - 2020*

(A copy of section 00 72 13, Standard Construction Contract CCDC 2 – 2020 (22 pages) is available upon request, otherwise, will form part of the contract sets to the successful bidder)

END OF SECTION 00 72 13



## SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS CCDC2 – 2020

The Canadian Standard Construction Document for Stipulated Price Contract (CCDC 2, 2020 version), Definitions and General Conditions governing same, shall be used by the project. The following Supplementary General Conditions (the “**Supplementary Conditions**”) are intended to Supplement or Amend the General Conditions, and where conflicts occur, the Supplementary Conditions shall take precedence.

Where a General Condition or paragraph of the General Conditions of the Stipulated Price Contract is Deleted by these Supplementary Conditions, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, and the numbering of the Deleted item will be retained, unused.

### 2 ARTICLE A-5 PAYMENT

Change 5.2.1 to delete the letter “s” from the word “rates”.

Change 5.2.1(1) to read: "1% per annum above the prime rate."

Delete 5.2.1(2) in its entirety.

Delete 5.2.2. in its entirety.

### DEFINITIONS

Add the following defined term to the Definitions:

#### Submittals

Submittals are documents or items required by the Contract Documents to be provided by the Contractor, such as:

1. Shop Drawings, samples, models, mock-ups to include details or characteristics, before the portion of the Work that they represent can be incorporated into the Work; and
2. As-built drawings and manuals to provide instructions to the operation and maintenance of the Work.

### 3 GC 1.1 CONTRACT DOCUMENTS

Add to the end of subparagraph 1.1.6.2:

1.1.6.2 Except where the Consultant shall be indemnified as a third party beneficiary as provided in subparagraphs 9.2.7.4, 9.5.3.4 and in 13.1.1.3.

Add subparagraph 1.1.4.1:

1.1.4.1 Notwithstanding GC 1.1.4, should one or more conflict exist between Contract Documents and any work is done without consulting the Consultant for correction, Additional information, or a finding, the Contractor shall assume full and sole responsibility for any Additional costs incurred related to the conflict(s).

#### **4 GC 2.4 DEFECTIVE WORK**

Add new subparagraphs 2.4.1.1 and 2.4.1.2:

2.4.1.1 The Contractor shall rectify, in a manner acceptable to the Owner and the Consultant, all defective work and deficiencies throughout the Work, whether or not they are specifically identified by the Consultant.

2.4.1.2 The Contractor shall prioritize the correction of any defective work which, in the sole discretion of the Owner, adversely affects the day to day operation of the Owner.

#### **5 PART 3 EXECUTION OF THE WORK**

##### **6 GC 3.1 CONTROL OF THE WORK**

Add new paragraphs 3.1.3 and 3.1.4:

3.1.3 Prior to commencing individual procurement, fabrication, and construction activities, the Contractor shall verify, at the Place of the Work, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the Work and shall further carefully compare such field measurements and conditions with the requirements of the Contract Documents. Where dimensions are not included or contradictions exist, or exact locations are not apparent, the Contractor shall immediately notify the Consultant before proceeding with any part of the affected work.

3.1.4 The Contractor shall make all reasonable efforts to ensure that the Work is carried out in a continuous manner. The Contractor shall not knowingly permit Construction Equipment and/or Products to be stored at the Place of Work when they are not being used in connection with or implemented into the Work, except in accordance with paragraph 3.7.7.1.

##### **7 GC 3.6 SUBCONTRACTORS AND SUPPLIERS**

Add the following paragraph 3.6.7:

3.6.7 A copy of the agreement between Contractor and any subcontractor(s) shall be provided to the Owner and the Consultant, if so requested.

##### **8 GC 3.7 LABOUR AND PRODUCTS**

Add the following paragraph 3.7.4:

3.7.4 The Contractor is responsible for the safe on-site storage of Products and their protection (including Products supplied by the Owner and other contractors to be installed under the Contract) in such ways as to avoid dangerous conditions or contamination to the Products or other persons or property and in locations at the Place of the Work to the satisfaction of the Owner and the Consultant. The Owner shall provide all relevant information on the Products to be supplied by the Owner.

Add the following paragraph 3.7.5:

3.7.5 The Contractor shall confine Construction Equipment, Temporary Work, storage of Products, waste products and debris, and operations of employees and Subcontractors to limits indicated by laws, ordinances, permits, or the Contract Documents and shall not unreasonably encumber the Place of the Work.

Add the following paragraph 3.7.6:

3.7.6 The Contractor shall maintain the Work in a safe and tidy condition and free from accumulation of waste products and debris.

Add the following paragraphs 3.7.7.1 and 3.7.7.2:

3.7.7 .1 The Contractor shall not permit Products or Construction Equipment to be stored at the Place of Work unless:

(i) the Products and/or Construction Equipment are used within fourteen (14) days of their arrival at the Place of Work; or

(ii) the Owner provides written permission for Products and/or Construction Equipment to be stored at the Place of Work, in which case the Contractor shall comply with the written instructions provided by the Owner in that regard, and said permission may be withdrawn by the Owner upon five (5) business days' notice, in which case the Contractor will be solely responsible for any costs, losses, or damages the Contractor incurs in connection the withdrawal of said permission;

.2 Notwithstanding any other provision of the Contract Documents, and subject only to the provisions of any Payment Legislation, the Owner shall not be liable to pay any amount greater than 25% of the actual cost of any Products and/or costs associated with Construction Equipment that is/are stored at the Place of Work and not used within 14 days of their arrival at the Place of Work. The Owner shall only become liable to pay for the remainder of said Products and/or costs of said Construction Equipment after those Products and/or Construction Equipment are actually used at the Place of Work and is/are invoiced in accordance with the terms of the Contract Documents.

Add the following paragraphs 3.7.8.1., 3.7.8.2, 3.7.8.3, and 3.7.8.4:

3.7.8 The Contactor shall:

.1 furnish competent and adequate labour and staff, who shall be in attendance at the Place of Work at all times, as necessary, for the proper administration, co-ordination, supervision, and superintendence of the Work;

.2 organize the procurement of all Products and Construction Equipment so that labour and staff will be available at the requisite times to complete the Work in accordance with GC 3.4 Construction Schedule;

.3 keep an adequate force of skilled workers at the Place of Work, as necessary, to complete the Work in accordance with all requirements of the Contract Documents and in accordance with GC 3.4 Construction Schedule; and

.4 provide the Owner, Project Manager, and Consultant, with the names, work addresses, and telephone numbers of the appointed representative of the Contract and other responsible field persons who may be contacted during non-working hours.

## 9 GC 3.8 SHOP DRAWINGS AND OTHER SUBMITTALS

Add the words “AND OTHER SUBMITTALS” to the Title after SHOP DRAWINGS in GC 3.8.

Add “and Submittals” after each instance of the words “Shop Drawings” in paragraphs 3.8.1, 3.8.2, 3.8.3, 3.8.3.2, 3.8.5, 3.8.6, and 3.8.7.

Add the following paragraph 3.8.1.1:

3.8.1.1 Prior to the first application for payment, the Contractor and the Consultant shall jointly prepare a schedule of the dates for submission and return of Shop Drawings and any Submittals.

Add the following subparagraph 3.8.4.1:

3.8.4.1 The following paragraph shall apply to each Shop Drawing and Submittal reviewed in connection with the project. The Consultant’s review conducted pursuant to GC 3.8.3 shall not imply that the Consultant has approved the detailed design inherent in the Shop Drawings or Submittals, responsibility for which shall remain with the Contractor submitting same. The Contractor is responsible for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the work of all sub trades.

Delete the following words in paragraph 3.8.7:

3.8.7 “with reasonable promptness so as to cause no delay in the performance of the Work” and replace those words with: “within ten (10) working days or such longer period as may be reasonably required”.

Add new GC 3.9 as follows:

**10 GC 3.9 CONTRACTOR RESPONSIBILITY FOR WATER TIGHTNESS**

GC 3.9 The Drawings and Specifications are not intended to depict each and every condition or detail of construction. As the knowledgeable party in the field, the contractor is in the best position to verify that all construction is completed in a manner which will provide a watertight structure.

**The contractor has the sole responsibility for ensuring the watertight integrity of the structure.**

Add new GC 3.10 as follows:

**11 GC 3.10 PERFORMANCE BY CONTRACTOR**

GC 3.10 In performing the Work and all its services and obligations under the Contract, the Contractor shall exercise a standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The Contractor acknowledges and agrees that throughout the Contract, the Contractor's obligations, duties and responsibilities shall be interpreted in accordance with this standard. The Contractor shall exercise the same standard of due care and diligence in respect of any products, personnel, or procedures which it may recommend to the Owner.

The Contractor further represents, covenants and warrants to the Owner that:

1. The personnel it assigns to the Project are appropriately experienced;
2. It has sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the Owner's approval, in the event of death, incapacity, removal or resignation.

**12 GC 4.1 CASH ALLOWANCES**

Delete paragraph 4.1.7 in its entirety and substitute:

4.1.7 At the commencement of the Work, the Contractor shall prepare for the review and acceptance of the Owner and the Consultant a schedule indicating the times, within the construction schedule referred to in GC 3.4, at which items called for under cash allowances and items that are specified to be purchased by the Owner and installed or hooked up by the Contractor are required to be at the Place of the Work to avoid delaying the progress of the Work.

Add new paragraph 4.1.8:

4.1.8 The *Owner* reserves the right to call, or to have the Contractor call, for competitive bids for portions of the Work, to be paid for from cash allowances.

### 13 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

Delete section GC 5.1 in its entirety.

### 14 GC 5.2 APPLICATION FOR PROGRESS PAYMENT

Add to paragraph 5.2.1, “, the Project Manager,” after the word “Owner”.

Add the following at the end of paragraph 5.2.2:

5.2.2 Such applications shall be accompanied by one or more of the following documents: a Statutory Declaration, Waiver of Lien, or receipt, stating that the holdback monies claimed have been paid to the particular party or parties so named or referred to therein. The form of the Statutory Declaration, Waiver of Lien, or receipt shall meet the approval of the Consultant.

Add the following paragraph 5.2.9:

5.2.9 The reference to payment for Products delivered to the Place of the Work in Article 5.2.8 shall not be construed as covering day-to-day financing of the Project. Products delivered to the Place of the Work shall be construed to mean major items of equipment or quantities of items that are essential for the expedient conduct of the Work.

Add the following paragraph 5.2.10:

5.2.10 The Contractor shall submit all applications for payment and invoices (with supporting documents as required by the Contract Documents) to the Owner via the following email address: [operations-invoices@hrce.ca](mailto:operations-invoices@hrce.ca).

### 15 GC 5.3 PAYMENT

Supplement paragraph 5.3.1 by adding the following:

5.3.1 A holdback percentage of ten (10) percent (%) shall apply to progress payments. The sworn statement by the Contractor for release of holdback monies shall be in the form of a Statutory Declaration meeting the approval of the Consultant. Amounts as certified by the Consultant to rectify deficiency items, or incomplete portions of individual work items, may be retained by the Owner after Substantial Performance has been obtained, pending Total Performance of the work or other authorization for release by the Consultant.

Amend subparagraph 5.3.1.2 as follows:

5.3.1.2 Delete "28" and replace with "30."

## **16 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK**

Add the following paragraph 5.4.7:

5.4.7. Before the Contractor submits his application for Substantial Performance of the Work, all Operations and Maintenance Manual materials shall be submitted in accordance with the Contract Documents. The Certificate of Substantial Performance will not be issued until this requirement is met.

Add the following subparagraph 5.4.8:

5.4.8 After the issuance of a certificate of Substantial Performance of the Work by the Consultant, the Contractor shall promptly submit to the Consultant and the Owner (i) a Certificate from a barrister stating that there are no Builders' Liens filed relating to the Work and (ii) a Clearance Letter from the Workers' Compensation Board.

## **17 GC 5.5 FINAL PAYMENT**

Add the following subparagraphs 5.5.1.1, 5.5.1.2, 5.5.1.3, and 5.5.1.4:

5.5.1.1 The Contractor's application for final payment is considered to be valid only when all of the following have been performed:

1. Work has been completed and inspected for compliance with Contract Documents, and the Consultant is satisfied that all the requirements of the Contract have been fulfilled by the Contractor.
2. Defects have been corrected, deficiencies have been completed, and the Place of Work is (i) free of waste products and debris, and (ii) clean and suitable for use or occupancy by the Owner.
3. Equipment and systems have been tested, adjusted and balanced and are fully operational, and written reports as outlined in the Contract Documents have been provided to the Consultant.
4. Certificates required by Utility companies, manufacturer's representative and inspectors have been submitted.
5. Spare parts, maintenance materials, warranties and bonds have been provided.

5.5.1.2 If Work is deemed incomplete by the Consultant, the Contractor shall complete outstanding items and request re-inspection.

5.5.1.3 If, within sixty (60) days after the issuance by the Consultant of the Certificate of Substantial Performance, the Contractor has not corrected all the deficiencies, the Owner will retain sufficient money to cover the cost of completing said deficiencies, as determined by the Consultant, in

addition to holding monies retained in accordance with the Contract Documents and subject to the provisions of the Builders' Lien legislation of Nova Scotia.

5.5.1.4 Neither the final certificate nor the payment thereunder, nor any provision in the Contract Documents shall relieve the Contractor from responsibility for faulty material or workmanship which shall appear within a period of one (1) year from the date when Ready-For-Takeover has been attained and the Contractor shall promptly remedy any defects due thereto and pay for any damage to other Work resulting therefrom which shall appear within such period of one year. The Owner shall give notice of observed defects reasonably promptly. This article shall not be deemed to restrict any liability of the Contractor arising out of any law in force in the Province of Nova Scotia.

## **18 GC 6.2 CHANGE ORDER**

Add the following paragraphs 6.2.3, 6.2.4, 6.2.5, 6.2.5, 6.2.6, 6.2.7, and 6.2.8:

- 6.2.3 All contemplated changes in the work shall be issued by the Consultant on a "Contemplated Change Order" form.
- 6.2.4 For lump sum pricing, the Contractor shall, upon receipt of the Contemplated Change Order, submit to the Consultant for approval within seven (7) days, a quotation for changes in the work. The Contractor acknowledges that failure to do so will result in foreseeable delay to the approval and payment of changes in the Work and foreseeable Additional costs to the Owner.
- 6.2.5 Quotation for changes shall be priced in sufficient detail (GC 6.6 applies).
- 6.2.6 Consultant shall, within five (5) working days, notify the Contractor whether estimates are accepted by Owner or further information is required. Acceptance of the Owner shall be indicated in writing, and a signed copy of the Contemplated Change Order form shall be returned to the Contractor.
- 6.2.7 The Contractor shall take reasonable measures to stop Work or minimize the Work in areas affected by or related to the contemplated change(s).
- 6.2.8 For each change in the Work, the Contract Price shall be increased by the net cost of that change in the Work, plus the following mark-ups for all overhead and profits:
- a. a 10% mark-up on the direct cost of the net change in the Work for change work performed by the Contractor's own forces; and
  - b. a 5% mark-up on the change work performed by Subcontractors.

Credits for reduced or Deleted portions of the Work shall be the actual cost of that Work, without Addition or subtraction of any amount by the Contractor for overhead and profit, and shall be included in the actual cost of the net change.



## 19 GC 6.3 CHANGE DIRECTIVE

Delete paragraph 6.3.6.3 of GC 6.3 and replace with:

6.3.6.3. The Contractor's percentage fee referred to in paragraphs 6.3.6.1 and 6.3.6.2 shall be calculated and determined applying the following percentage mark-ups for overhead and profit:

- a. a 10% mark-up on the direct cost of the net change in the Work for change work performed by the Contractor's own forces; and
- b. a 5% mark-up on the change work performed by Subcontractors.

Add to GC 6.3 the following paragraphs 6.3.14 and 6.3.15:

6.3.14 If unit prices are set out in the Contract or subsequently agreed upon, then the unit process alone shall govern in relation to determining the cost of any item for a Change Directive.

6.3.15 Payment of the cost of performing work attributable to a Change Directive shall be made only if and to the extent that the Contractor has taken all reasonable steps to mitigate and minimize the impact of the change and the resulting cost.

## 20 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

Add new paragraph 6.4.5:

6.4.5 The *Contractor* confirms that, prior to bidding the *Project*, it carefully investigated the Place of the Work and applied to that investigation the degree of care and skill described in paragraph 3.10, given the amount of time provided between the issue of the bid documents and the actual closing of bids, the degree of access provided to the Contractor prior to submission of bid, and the sufficiency and completeness of the information provided by the Owner. The Contractor is not entitled to compensation or to an extension of the Contract Time for anything which could reasonably have been ascertained by the Contractor by such careful investigation undertaken prior to the submission of the bid.

## 21 GC 6.5 DELAYS

Delete the period at the end of paragraph 6.5.1 and substitute the following words:

6.5.1 “, but excluding any consequential, indirect or special damages.”

Add new paragraph 6.5.6:

6.5.6 If the Contractor is delayed in the performance of the Work by any act or omission of the Contractor or anyone employed or engaged by the Contractor directly or indirectly, or by any cause within the Contractor's control, then the Contract Time shall be extended for such reasonable time as the Consultant may decide in consultation with the Contractor. The Owner shall be reimbursed by the

Contractor for all reasonable costs incurred by the Owner as the result of such delay, including all services required by the Owner from the Consultant as a result of such delay by the Contractor and, in particular, the cost of the Consultant's services during the period between the Ready-for-Takeover date stated in Article A-1 herein (subject to any adjustment in accordance with the Contract Documents) and any later, actual date Ready-for-Takeover is attained by the Contractor.

Add new paragraph 6.5.7:

6.5.7 The Consultant shall not, except by written notice to the Contractor, stop or delay any part of the Work pending decisions or proposed changes.

## **22 GC6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE**

Add the following to the end of paragraph 6.6.1, deleting the "." after the word "Consultant":

"in no case more than 10 Working Days from the event or series of events giving rise to the claim".

Amend paragraph 6.6.5 as follows:

6.6.5 Add the words "as noted in paragraph 6.6.3" after the words "of the claim" and add the words "and the consultant", at the end.

Add the following paragraph 6.6.7:

6.6.7 If the Contractor claims for an increase in the Contract Price pursuant to this GC 6.6, the amount of any such claim shall be limited to the amount determined in accordance with the methods of quantification set out in paragraphs 6.3.6, 6.3.7, and 6.3.14 of GC 6.3, and the Contractor shall promptly submit a detailed breakdown of all labour, materials, overhead, and profits claimed, including those of Subcontractors. Contemporaneous records are required to support a claim for an increase in the Contract Price, and the Owner retains the right to verify all submitted records through an independent audit. The Owner is not liable for costs not so substantiated. Any mark-up for overhead and profit on the claimed amount under this GC 6.6 shall be limited to the amounts provided for under GC 6.3.6.3, as Amended by these Supplementary Conditions.

## **23 GC 8.3 NEGOTIATION, MEDIATION, AND ARBITRATION**

Add the following paragraphs 8.3.9, 8.3.10, 8.3.11, 8.3.12, 8.3.13, 8.3.14, and 8.3.15:

8.3.9 Within five (5) days of receiving a Notice in Writing requesting arbitration, the party receiving the notice shall give the Consultant a written notice containing:

- a. a copy of the Notice in Writing requesting arbitration;
- b. a copy of supplementary conditions 8.2.9 to 8.2.14 of this contract, and;

- c. a concise description of any claims or issues which the Contractor or the Owner, as the case may be, wishes to raise in relation to the Consultant arising out of the issues in dispute in the arbitration.

8.3.10 The Owner and the Contractor agree that the Consultant may elect, within ten (10) days of receipt of the notice under paragraph 8.3.9, to become a full party to the arbitration under paragraph 8.3.6 if the Consultant:

- a. has a vested or contingent financial interest in the outcome of the arbitration;
- b. gives the notice of its election to the Owner and the Contractor before the arbitrator is appointed;
- c. agrees to be a party to the arbitration within the meaning of the rules referred to in paragraph 8.3.6, and;
- d. agrees to be bound by the arbitral award made in the arbitration.

8.3.11 If an election is made under paragraph 8.3.10, the Consultant may participate in the appointment of the arbitrator and, notwithstanding the rules referred to in paragraph 8.3.6, the time period for reaching agreement on the appointment of the arbitrator shall begin to run from the date the respondent receives a copy of the notice of arbitration.

8.3.12 The arbitrator in the arbitration in which the Consultant has elected under paragraph 8.3.10 to become a full party may:

- a. on application of the Owner or the Contractor, determine whether the Consultant has satisfied the requirements of paragraph 8.3.10, and;
- b. make any procedural order considered necessary to facilitate the Addition of the Consultant as a party to the arbitration.

8.3.13 The provisions of paragraph 8.3.9 shall apply mutatis mutandis to written notice to be given by the Consultant to any sub-consultant.

8.3.14 In the event of notice of arbitration given by the Consultant to a sub-consultant, the sub-consultant is not entitled to any election with respect to the proceeding as outlined in 8.3.10, and is deemed to be bound by the arbitration proceeding.

8.3.15 An application for arbitration shall be accompanied by security in the amount of \$1,000 to apply to the cost of arbitration. Any claims of excess costs must be submitted in writing to the Consultant within two weeks of completion or alleged completion of the work. No claims shall be accepted after this date and, also, no claims shall be accepted for disputed work unless the Consultant has been notified as specified.

## **24 GC 9.1 PROTECTION OF WORK AND PROPERTY**

Delete subparagraph 9.1.1.1 in its entirety and substitute the following new paragraph 9.1.1.1:

9.1.1.1 errors or omissions in the Contract Documents which the Contractor could not have discovered applying the standard of care described in paragraph 3.10.

Delete paragraph 9.1.2 in its entirety and substitute the following new paragraph 9.1.2:

9.1.2 Before commencing any Work, the Contractor shall determine the locations of all underground utilities and structures indicated in the Contract Documents, or that are discoverable by applying to an Inspection of the Place of the Work exercising the degree of care and skill described in paragraph 3.10.

## **25 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES**

Add in paragraph 9.2.6 after the word “responsible”, the following new words:

9.2.6 Or whether any toxic or hazardous substances or materials already at the Place of the Work (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the Contractor or anyone for whom the Contractor is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damage to the property of the Owner and others,

Add in subparagraph 9.2.7.4:

9.2.7.4 “and the Consultant” after “Contractor”:

Add in paragraph 9.2.8 after the word “responsible”, the following new words:

9.2.8 or that any toxic or hazardous substances or materials already at the Place of the Work (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the Contractor or anyone for whom the Contractor is responsible in a manner which does not comply with legal and regulatory requirement, or which threatens, human health and safety or the environment, or material damage to the property of the Owner or others,

## **26 GC 9.4 Construction Safety**

Add to the end of paragraph 9.4.1:

The Contractor shall be responsible for and ensure the safety of not only the workers, Subcontractors, tradespeople, and Suppliers, and their equipment, but also of all other persons who enter the Place of Work whether during working hours or not, and for that purpose shall erect

such hoardings and signs and shall employ such safety measures as may be necessary to ensure the safety of such persons.

Delete paragraph 9.4.5 and replace with:

The Contractor shall be responsible for the cost to comply with any public health order(s) affecting the performance of the Work issued pursuant to the Health Protection act (Nova Scotia) or pursuant to any similar legislation, whether Federal or Provincial.

## **27 GC 9.5 MOULD**

Add in subparagraph 9.5.3.4:

9.5.3.4 “and the Consultant” after “Contractor”

## **28 GC 10.1 TAXES AND DUTIES**

Add the following paragraph 10.1.3:

10.1.3 The Contractor shall indicate on each application for payment as a separate amount, the appropriate Harmonized Sales Tax the Owner is legally obliged to pay. This amount will be paid to the Contractor in Addition to the amount certified for payment under the Contract. The Contractor’s HST registration number must appear on all invoices.

## **29 GC 10.2 LAWS, NOTICES, PERMITS AND FEES**

Delete from the first line of paragraph 10.2.5 the word, “The” and substitute the words:

10.2.5 “Subject to paragraph 3.10, the”

## **30 GC 10.4 WORKERS' COMPENSATION**

Add the following paragraphs 10.4.2, 10.4.3, 10.4.4, and 10.4.5:

10.4.2 The contractor is referred to regulations, as applicable, under the Worker's Compensation Act of Nova Scotia.

10.4.3 The Contractor’s registration with the Worker’s Compensation Board shall be continuous during the contract. Should registrations be scheduled to expire during the contract period, the Contractor shall submit a copy of its registration renewal one month prior to the expiration of the current certificate.

10.4.4 The Contractor shall furnish evidence of coverage under the Worker’s Compensation Act of Nova Scotia and a clearance Certificate providing proof of registration with the Worker’s Compensation Board prior to commencement of the Work. (A photocopy of the Contractors registration

certificate is acceptable proof). On-going proof of good standing with the Worker's Compensation Board during the term of the contract is required.

10.4.5 The Contractor shall also maintain a Certificate of Recognition (COR) from a safety audit company recognized by the Workers' Compensation Board, such as the Nova Scotia Construction Safety Association, for the duration of the Contract. The Contractor shall provide a copy of its COR to the Owner and Consultant prior to commencement of the Work and shall provide a copy of its COR to the Owner or Consultant upon request.

### GC 11.1 INSURANCE

Delete sentences and replace with the following in subparagraph 11.1.1.1:

11.1.1.1 **Delete:** "General liability insurance shall be maintained from the commencement of the Work until one year from the date of Ready-for-Takeover. Liability coverage shall be provided for completed operations hazards from the date of Ready-for-Takeover on an ongoing basis for a period of 6 years following Ready-for-Takeover" **and replace with:** "General Liability Insurance or Wrap- Up Liability Insurance, (as detailed in the Information to Tenders section under "Insurance Requirements"), shall be maintained from the commencement of the Work until final completion and acceptance of the Work including the making good of faulty work or materials, except that coverage of completed operations liability shall in any event be maintained for twelve (12) months from date of Ready-for-Takeover".

Add the following subparagraphs 11.1.1.1.1, 11.1.1.1.2, and 11.1.1.2.1:

11.1.1.1.1 The general liability insurance to be maintained by the Contractor shall include Commercial General Liability Insurance covering Premises and Operations Liability, elevators, broad form property damage, broad form automobile, owners and contractors protective, blanket contractual, personal injury, completed operations liability contingent employers liability, cross liability clause, non-owned automobile liability, and a 30 day notice of cancellation clause.

11.1.1.1.2 All liability insurance policies shall be written in such terms as will fully protect the Contractor and The Halifax Regional Centre for Education as an Additional named insured.

11.1.1.2.1 Liability coverage of not less than ten million dollars (\$10,000,000) is required with regard to operations of owned and non-owned automobiles.

Delete subparagraph 11.1.1.4 in its entirety and insert the following subparagraphs:

11.1.1.4 Broad Form (All Risks) Builders Risk Coverage - Prior to the commencement of any Work the Contractor shall maintain and pay for Broad Form (All Risks) Builders Risk Coverage in the joint names of The HRCE and the Contractor totaling not less than one hundred percent (100%) of the total value of the Work to be done and materials delivered on the site

(contract value), so that any loss under such policies of insurance will be payable to The HRCE and the Contractor as their respective interests appear. The Builders Risk Insurance shall include all materials related to the Work while in transit or at other locations.

- 11.1.1.4.1 Should a loss be sustained under the Builders Risk Coverage, the Contractor shall act on behalf of The HRCE and Contractor for the purpose of adjusting the amount of such loss with the insurance companies. As soon as such adjustment has been satisfactorily completed, the Contractor shall proceed to repair the damage and complete the Work and shall be entitled to receive from The HRCE in Addition to any sum due under the Contract, the amount at which The HRCE interest has been appraised in the adjustment made with the insurance companies as referred to above, said amount to be paid to the Contractor as the Work of restoration proceeds. Any loss or damage which may occur shall not affect the rights and obligations of either party under the Contract except as aforesaid and except that the Contractor shall be entitled to a reasonable extension of time for the performance of the Work, as The HRCE may decide.
- 11.1.1.4.2 Upon Ready-for-Takeover being attained, the Contractor's obligation to maintain Builder Risk Insurance shall cease and The HRCE shall assume full responsibility for insuring the whole of the Work against loss or damage.
- 11.1.1.4.3 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the Work until the earliest of:
- 11.1.4.3.1 Ten (10) Calendar days after Ready-for-Takeover;
- 11.1.4.3.2 on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square meter in area, or parking purposes, or for the installation, testing and commissioning or equipment forming part of the *Work*; and
- 11.1.4.3.3 when left unattended for more than thirty (30) consecutive calendar days or when construction activity has ceased for more than thirty (30) consecutive calendar days.

Paragraph 11.1.2 is supplemented as follows:

- 11.1.2 In addition, within seven (7) working days after notification of award or in any event prior to payment of the first progress claim, the Contractor shall submit certified true copies of each insurance policy to the Owner's Contract Authority. Such copies shall be exclusive of information pertaining to premium or premium bases used by the insurer to determine the cost of the insurance. Prior to the commencement of any work, the Contractor shall file with the Owner a certified copy of each insurance policy and certificate required.

Delete 11.1.5 in its entirety and replace with the following:

11.1.5 Insurance contracts shall be procured from and the premiums paid to a resident agent of an insurance Company licensed to underwrite insurance in the Province of Nova Scotia.

Add the following paragraph 11.1.9:

11.1.9 All of the insurance policies shall contain a clause stating that no change in terms and conditions or cancellation may at any time be made without the full knowledge and consent of the Owner.

### **31 GC 11.2 CONTRACT SECURITY**

Add the following paragraphs 11.2.1, 11.2.2, and subparagraph 11.2.2.1:

11.2.1 The Contractor shall, prior to commencement of the *Work* or within the specified time, provide to the *Owner* and the Consultant the *Contract* security specified in the *Contract Documents*.

11.2.2 If the *Contract Documents* require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms, or in such other form as specified by the Owner.

11.2.2.1 "Bonds shall be procured from a Nova Scotia resident agent of an insurance company licensed to do business in Nova Scotia and shall be maintained in good standing and held by the Owner until one (1) year after Ready-for-Takeover.

Add the following paragraph 11.2.3:

11.2.3 If a Certified Cheque is held as contract security it shall be in an amount equal to ten (10) percent (%) of the Contract Price. The Contract shall supplement the Certified Cheque as necessary to maintain the amount equal to ten (10) percent (%) of the total amount payable (Contract Price plus HST).

- .1 The Certified Cheque will be deposited at the chartered bank holding The HRCE deposits.
- .2 The HRCE will return the cheque amount to the Contractor upon satisfactory completion of the contract and duration as specified in the Tender documents.
- .3 Should Contractor default, total amount payable under the Certified Cheque will be the face value of the cheque plus all accrued interest.
- .4 Payment for completion of work, due to failure of performance of the Contractor, shall include all reasonable obligations under the Contract, including architectural and engineering costs arising because of the default of the Contractor.



- .5 Payment for labour and materials shall be limited to those who have a direct contract with the Contractor for the provision of labour and/or material (which includes equipment rental).

### **32 GC 12.3 WARRANTY**

In paragraph 12.3.2, delete from the first line the word, "The" and substitute the words:

12.3.2 "Subject to paragraph 3.10, the..."

Add the following paragraph 12.3.7:

12.3.7 Warranty repairs or replacements which arise during warranty period which affect the operation of the system shall be attended to immediately upon notification from the Consultant.

### **33 GC 13.3 INDEMNIFICATION**

Add the following paragraph 13.1.1.3:

13.1.1.3 The Contractor shall indemnify and hold harmless the Consultant, its agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceeding by third parties that arise out of, or are attributable to, the Contractor's performance of the Contract, provided such claims are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and caused by negligent acts or omissions of the Contractor or anyone for whose acts the Contractor may be liable, and made in writing within a period of six (6) years from t Ready-for-Takeover, or within such shorter such period as may be prescribed by any limitation statute or the province or territory of the Place of the Work.

**END OF SECTION 00 73 00**

## SECTION 01 11 00 - HRCE SUMMARY OF WORK

### 1. Project Location & General Scope

- 1.1. Rockingstone Heights School, 1 Regan Drive, Halifax, NS B3R 2J1
- 1.2. Scope: Refer to Section 00 00 15 for scope and schedule information.

### 2. Contract Documents

- 2.1. Work will be performed under CCDC-2 contract.

### 3. General Conditions

- 3.1. Halifax Regional Centre for Education and CCDC-2 form an integral part of this Project Manual, a copy of which is bound herein.

### 4. Project Manual

- 4.1. Sections of the Project Manual are numbered in conformance with the Master List of Section Titles and Numbers, CSC Document 004E, published jointly by Construction Specifications Canada and The Construction Specifications Institute (USA). Sections are arranged in their standard format.
- 4.2. Sections are written as units of the Work which have been assigned numbers in conformance with the CSC/CSI system. They are arranged in sequence for this Manual. Gaps in the order of numerical sequence do not indicate that a section has been inadvertently omitted from this Manual, but, rather that a Section is not required for completion of the Work.
- 4.3. Wherever the project location building name occurs in the Contract Documents it shall be taken to mean all work included in the Contract.
- 4.4. Wherever in the Contract Documents the words "approval", "approved", "direction", "directed", "selection", "selected", "request", "requested", "report", and similar words are used, such approvals, directions, selections, requests and reports shall be given by the HRCE unless specifically stated otherwise.
- 4.5. Wherever in the Contract Documents the word "provide" is used in any form, it shall mean that the Work concerned shall include both supply and installation of the products required for completion of that part of the Work.
- 4.6. Wherever in this Project Manual it is specified that Work is to proceed or to meet approval, direction, selection or request of jurisdictional authorities or others, such approval, direction, selection or request shall be in writing.

**5. Errors & Omissions**

- 5.1.** If errors or omissions are observed in the Contract Documents, immediately notify the HRCE Procurement Contact in writing of all such errors or omissions. In the event no such notice is given, the Contractor will be held responsible for the results of any such error or omission and the cost of rectifying the same.

**6. Division 1**

- 6.1.** The provisions of all Sections of **Division 1** shall apply to each Section of this Specification.

**7. Wage Rates**

- 7.1.** Pay all employees engaged on the Work a wage not less than the minimum wage per hour as set out by the Province of Nova Scotia. For overtime work beyond 48 hours in any one week, pay no employee at a rate of less than one and one-half times the minimum wage per hour noted above. Provide for these wage rates in tendered contract amount.

**8. Work Performed Under Separate Contracts**

- 8.1.** Work not to be included in the Contract, as noted "NIC" on the Drawings, shall be governed by Article 37, Separate Contracts, of General Conditions of Contract.
- 8.2.** Furniture installation will be carried out by others.
- 8.3.** Computer installation will be carried out by others.

**9. Project Schedule**

- 9.1. Refer to Section 00 00 15 Description of Work.**
- 9.2.** Existing services (mechanical & electrical) will need to be maintained through the renovations.
- 9.3.** During construction, all life safety systems as well as mechanical and electrical systems must be in active, usable condition to permit the school to operate or alternate methods used to ensure the safe operation of the school as directed by HRCE project representative.
- 9.4.** As construction progresses revise the schedule to compensate for any delays or unforeseen activities so as to maintain the contract completion date. Each schedule submission is to be complete with a statement indicating the changes made, the reason they were changed and confirmation that the project completion date will not change. The above schedule information is to be submitted monthly or more often if necessary.

## **10. Site Progress Records**

- 10.1.** Maintain at site a permanent written record of progress of Work. Make the record available at all times with copies provided when requested. Include in record each day:
  - 10.1.1.** Commencement and completion dates of the Work of each trade in each area of Project.
  - 10.1.2.** Attendance of Contractor's and Subcontractor's Work forces at Project and a record of the work they perform.
  - 10.1.3.** Visits to site by representatives of the Owner, Engineer, jurisdictional authorities, Contractor, Subcontractors, and suppliers.
- 10.2.** Maintain a progress chart in approved format. Show on chart proposed Work schedule and progress of Work by Contractor and Subcontractor.

## **11. Examination**

- 11.1.** Site:
  - 11.1.1.** Examine site, and ensure that site conditions have been examined, that all are fully informed on all particulars which affect Work thereon and at the place of construction, and in order that construction proceeds competently and expeditiously.
  - 11.1.2.** Ensure by examination that all physical features, and working restrictions and limitations which exist are known.
- 11.2.** Previously Completed Work:
  - 11.2.1.** Verify dimensions of existing Work in place before construction of Work to be incorporated with it.
  - 11.2.2.** Verify that previously executed Work and surfaces are satisfactory for construction, and that performance of subsequent Work will not be adversely affected.
  - 11.2.3.** Commencement of Work will constitute acceptance of site conditions and previously executed Work as satisfactory.
  - 11.2.4.** Report to Engineer defects in prior Work which will affect quality of subsequent Work, or construction schedule.
- 11.3.** Construction Measurements:
  - 11.3.1.** Before commencing installation of Work, verify that its layout is accurate in accordance with intent of Drawings, and that locations, elevations, and clearances to adjacent infrastructure are maintained.
  - 11.3.2.** If Work is installed in wrong location, rectify it before other Work concerned proceeds.

## **12. PROTECTION OF WORK, PROPERTY & PERSONS**

- 12.1.** Include in Work necessary methods, materials, and construction to ensure that no damage or harm to Work, materials, property and persons results from the Work of this Contract. Temporary facilities relating to protection are specified in Section 01 52 00.
- 12.2.** Protect, and if damaged make good, adjacent private and public property.
- 12.3.** Keep surfaces, on which finish materials will be applied, free from grease, oil, and other contamination which would be detrimental in any way to the application of finish materials.
- 12.4.** Protect finished surfaces of completed Work from damage by restriction of access or by use of physical means suitable to the material and surface location. Establish with each Subcontractor the suitability of such protection in each case.
- 12.5.** Protect existing underground infrastructure, mechanical, electrical, telephone and similar services from damage. If necessary, relocate active services to ensure that they function continuously in safety and without risk of damage.
- 12.6.** Cap off and remove unused utility services encountered during Work after approval is given by the utilities concerned or jurisdictional authorities, whichever may apply. Relocation, removal, protection and capping of existing utility services shall be performed only by the applicable utility and of other services by licensed mechanics.
- 12.7.** To prevent soiling or damage to finish flooring where pedestrian traffic occurs after the flooring has been installed, install and maintain 6 mil. polyethylene membrane or reinforced kraft paper temporary protection, secured in place and with joints sealed by reinforced pressure sensitive tape.
- 12.8.** Install plywood panels of minimum ¼" thickness over completed finish flooring materials, on which further construction Work is performed by other trades or delivery of products is made, or both. Seal joints between panels with reinforced pressure sensitive tape.
- 12.9.** Prevent spread of dust beyond the construction zone by wetting, or by other approved means, as it accumulates.
- 12.10.** The outside work area shall be appropriately demarked and/or surrounded by rigid chain link panels or fencing (at the cost of the contractor) to prevent unauthorized entry to the work area. Any area of roof having work completed is to be covered below with this fencing approximately 10' from the edge of the building. It is to be maintained at all times throughout the project. All waste disposal bins are to be fenced in using the same type of fencing as indicated above during working hours. After working hours, all waste disposal bins shall be located a minimum of 25 feet from any structure. Any windows where the debris chute is located are to be covered. All entrances below the roof area are to have covered scaffolding erected to ensure a safe travel path to a distance of ten feet from edge of building. All workers shall contain their activity to the work site area. Access to the school shall only be allowed as

planned in coordination with HRCE Operations and the school administration.

- 12.11.** All security on site shall be coordinated through HRCE using an HRCE preferred vendor.
- 12.12.** The contractor is responsible for the cost of security for all project materials.
- 12.13.** If access to the project site is required inside the building, HRCE will provide security personnel at its own cost.
- 12.14.** The contractor shall keep the work site free from accumulated debris caused by the employees or work and shall remove all debris at the end of each work shift. Debris shall not be deposited in HRCE controlled garbage and/or recycling containers.
- 12.15.** All waste materials and debris created during demolition and/or construction shall be disposed of in a dumpster provided by the contractor, to be removed at the end of the construction project, using a methodology that is in compliance with the applicable HRM solid waste by laws. Otherwise, the material must be removed and disposed of off-site at the end of each working day. The waste materials may not be stored on site unless they are held in an approved project dumpster no closer than twenty five (25) feet from any structure.
- 12.16.** All temporary structures such as portable washroom facilities, materials storage trailer, work trailer, debris dumpster, vehicles, etc., shall be located a minimum of (25) twenty-five feet from the school building.
- 12.17.** Where applicable, a hot work permit will be required to be completed and approved by HRCE prior to commencement of work and all conditions of the permit must be maintained until completion of hot work. A copy of the hot work permit signed by the contractor representative shall be provided to HRCE upon completion of each hot work session. Contractor must assign a designated fire watch as noted on the permit document who shall remain on site for three hours after completion of each hot work session.
- 12.18.** A school washroom will be designated for use where appropriate. However, protection of the surfaces as indicated above must be maintained. It should also be noted that access to the building during summer months will be limited for security reasons. Contractor is responsible to provide temporary portable washroom facilities for general use of contractor staff.
- 12.19.** Access to Interior of School - All interior access is to be scheduled with the PM. This will allow for notice to the school admin., custodial and possible scheduling of a security guard for after hour access.
- 12.20.** Adhesives / Torch Work - All adhesive use and torch work must be completed after school hours. Contractor must assign a designated fire watch as indicated above in 12.17.

### **13. Cleaning**

- 13.1.** Ensure that during and after construction the public streets and existing asphalt parking lot are cleaned as required.

**14. Salvage**

- 14.1.** Unless otherwise specified, salvaged material resulting from construction, and surplus materials and construction debris shall become property of Contractor, who must dispose of it away from Site.

**15. Site Limitations**

- 15.1.** Since the existing building will be occupied during the Work (in accordance with the Phasing Schedule) the Architect will designate the precise areas on the site which may be utilized for work and storage, and where personnel will be permitted to be present. Refer also to Drawings. Allow for hoarding to secure construction areas from occupied portions of the Building and Site.
- 15.2.** All access to the construction site is to be coordinated with the Project Manager for HRCE and communicated at the pre-construction meeting.
- 15.3.** Any Work carried out in the building is to be carried out during hours approved by the School Administration.
- 15.4.** Any disruption to services within the building must occur during hours approved by School Administration.
- 15.5.** Any Work which may have an adverse effect on the occupancy functions, must have prior approval of the School Administration and **may** require scheduling during off-hours.

**16. Security Regulations**

- 16.1.** Perform Work in conformance to the security regulations of the building as directed by the Project Manager for HRCE.

**17. Project Identification**

- 17.1.** No project sign is required on this Project.

**18. Owner's Occupancy**

- 18.1.** The Owner reserves the right to occupy and use portions of the Project, whether partially or entirely completed, or whether completed on schedule or not, provided such occupancy does not interfere with the Contractor's continuing Work.
- 18.2.** Partial occupancy or installation by the Owner of his equipment shall not imply acceptance of the Project in whole, or in part, nor shall it imply acknowledgement that terms of the Agreement are fulfilled.

**END OF SECTION 01 11 00**

## SECTION 01 11 25 - PRICES

### 1. General

- 1.1. Prices included in the Contract shall be complete for the applicable Work, and shall include for each price:
  - 1.1.1. Expenditures for wages and for salaries of workmen, engineers, superintendents, draftsmen, foremen, timekeepers, accountants, expeditors, clerks, watchmen and such other personnel as may be approved, employed directly under the Contractor and while engaged on the applicable Work at the site and expenditures for travelling and HRCE allowances of such employees when required by location of the applicable Work or when covered by trade agreements and when approved; provided, however, that nothing shall be included for wages or salary of the Contractor if an individual, or of any member of the Contractor's firm if the Contractor is a firm or the salary of any officer of the Corporation if the Contractor is a corporation, unless otherwise agreed to in writing.
  - 1.1.2. Expenditures for material used in or required in connection with the construction of the applicable Work including material tests and required by the laws or ordinances of any authority having jurisdiction and not included under Subparagraph .9.
  - 1.1.3. Expenditures for preparation, inspection, delivery, installation and removal of materials, equipment, tools and supplies.
  - 1.1.4. Temporary facilities as required for the applicable Work.
  - 1.1.5. Travelling expenses properly incurred by the Contractor in connection with the inspection and supervision of the applicable Work or in connection with the inspection of materials prepared or in course of preparation for the applicable Work and in expediting their delivery.
  - 1.1.6. Rentals of all equipment whether rented from the Contractor or others, in accordance with approved rental agreements including any approved applicable insurance premiums thereon and expenditures for transportation to and from the site of such equipment, costs of loading and unloading, cost of installation, dismantling and removal thereof and repairs or replacements during its use on the applicable Work, exclusive of any repairs which may be necessary because of defects in the equipment when brought to the Work or appearing within thirty (30) days thereafter.
  - 1.1.7. The cost of all expendable materials, supplies, light, power, heat, water and tools (other than tools customarily provided by tradesmen) less the salvage value thereof at the completion of the applicable Work.
  - 1.1.8. Assessments under the Workmen's Compensation Act, the Unemployment Insurance Act, Canada Pension Act, statutes providing for government hospitalization, vacations



with pay or any similar statutes; or payments on account of usual vacations made by the Contractor to his employees engaged on the applicable Work at the site, to the extent to which such assessments or payments for vacations with pay relate to the Work covered by the specified price; and all sales taxes or other taxes where applicable.

- 1.1.9. The amounts of all Subcontracts related to the specified price.
- 1.1.10. Premiums on all insurance policies and bonds called for under this Contract as related to the specified price.
- 1.1.11. Royalties for the use of any patented invention on the applicable Work.
- 1.1.12. Fees for licenses and permits in connection with the applicable Work. No Building Permit is required for the project.
- 1.1.13. Duties and taxes imposed on the applicable Work.
- 1.1.14. Such other expenditures in connection with the applicable Work as may be approved.
- 1.1.15. Provided always that except with the consent of the Owner, the above items of cost shall be at rates comparable with those prevailing in the locality of the Work.

**END OF SECTION 01 11 25**

## SECTION 01 11 41 - PROJECT COORDINATION

### 1. Requirements Included

- 1.1. Each Trade Contractor's responsibilities include the coordination of Work within his own Contract and with the Work of other Contracts.

### 2. Related Requirements

- 2.1. Project Meetings: Section 01 31 19
- 2.2. Submittals: Section 01 33 00

### 3. Description

- 3.1. Coordinate Work on which subsequent Work depends to facilitate mutual progress, and to prevent conflict between parts of the work.
- 3.2. Ensure that each Section makes known for the information of the Construction Manager and other Sections, the environmental and surface conditions required for the execution of its Work, and the sequence of others Work required installation of its Work.
- 3.3. Ensure that each Section, commencing Work, and that each Section is assisted in the execution of its preparatory Work by Sections depending upon its preparation.
- 3.4. Deliver materials supplied by one Section to be installed by another well before the installation begins.
- 3.5. Sections giving installation information in error, or too late to incorporate in the Work, shall be responsible for having Work done which was thereby additionally made necessary.
- 3.6. Coordinate warranty conditions of interconnected Work to ensure that full coverage is obtained.
- 3.7. Remove work installed in error which is unsatisfactory for subsequent Work.

### 4. Cutting And Patching

- 4.1. Include under Work of this Section all cutting and patching of asphalt required by the Work.
- 4.2. Finish new surfaces flush with existing surfaces.
- 4.3. Cut and patch as required making work fit.
- 4.4. Make cuts with clean, true, smooth edges.
- 4.5. Patching of existing or new asphalt shall be performed only by workmen with expertise in that particular trade and who normally perform that Trade.
- 4.6. Replace, and otherwise make good, damaged or defective Work. If required by the Construction Manager.

- 4.7. Do not endanger Work or property by cutting, digging, or similar activities. No Section shall cut or alter the Work of another Section unless approved by the Section which has installed it.
- 4.8. Cut and drill with true smooth edges and to minimum suitable tolerances.
- 4.9. If required, before cutting, drilling, or sleeving structural load bearing elements, obtain approval of location and methods.
- 4.10. Cutting, drilling and sleeving of Work shall be done only by the Section which has installed it. The Section requiring drilling and sleeving shall inform the Section performing the Work of the location and other requirements for drilling and sleeving. The Contractor shall directly supervise performance of cutting and patching.
- 4.11. Cutting and Patching for Holes Required by Mechanical & Electrical Work:
  - 4.11.1. Include under Work of Mechanical Divisions cutting or provision of holes up to 8" in diameter and related patching.
  - 4.11.2. Include under Work of this Section holes and other openings required by the work of Mechanical Divisions which are larger than 8" in diameter or least dimension, and chases, bulkheads, furring and required patching. This Section shall be responsible for determination of Work required for holes in excess of 8" diameter or least dimension.
  - 4.11.3. Include under the Work of Electrical Divisions all cutting or provision of holes and related patching for the Work of that Division.
- 4.12. Include under Work of this Section all other cutting and patching required by the Work except as described in Clause .11 above.
- 4.13. Patching or replacement of damaged Work shall be done by the Subcontractor under whose Work it was originally executed, and at the expense of the Subcontractor who caused the damage.
- 4.14. Make patches invisible in final assembly.

## 5. Quality Assurance

- 5.1. Requirements of Regulatory Agencies:
  - 5.1.1. Make known and coordinate the requirements of jurisdictional authorities, as made explicit by the Contract Documents, and by representatives of such authorities
- 5.2. Source Quality Control:
  - 5.2.1. Ensure that Work meets specified requirements
  - 5.2.2. Schedule, supervise and administer inspection and testing as specified in Section 01 45 00.
- 5.3. Job Records:
  - 5.3.1. Maintain job records and ensure that such records are maintained by subcontractors.

**Submittals**

- 5.4. Prepare a Project schedule in accordance with Section 01 33 00, and ensure that all subcontractors and suppliers are aware of the details of this schedule, and progressively of their general compliance with the schedule.
- 5.5. Become aware of the required submittals specified in each Section, and expedite submission of such submittals so as not to hinder the Project Schedule.
- 5.6. Review submittals and make comments as specified in Section 01 33 00.

**6. Job Conditions**

- 6.1. Ensure that Work proceeds under conditions meeting specified environment and job safety requirements
- 6.2. Ensure that protection of adjacent property and the Work is adequately provided and maintained to meet specified requirements.

**7. Product Delivery, Storage And Handling**

- 7.1. Site has limited spaces for storage, only delivery of materials agreed upon by the Construction Manager will be allowed. Comply with Construction Manager's allocations. Any requirement for modifications to the building in order to allow delivery and storage of the materials to complete this work is the responsibility of the contractor.
- 7.2. Schedule delivery of products & removal of material with Construction Manager.
- 7.3. Make available areas for storage of products and construction equipment to meet specified requirements, and to ensure a minimum of interference with progress of the Work and relocations.
- 7.4. Trade Contractor to provide flag persons, traffic signals, barricades and Flares/lights/lanterns as required to perform the Work and to protect the public.
- 7.5. Material and Waste - Deliveries and Removals - Must be coordinated to be completed 30 minutes after school dismissal where applicable.

**END OF SECTION 01 11 41**

## SECTION 01 31 19 – PROJECT MEETINGS

### 1. Pre-Award Meeting

- 1.1. A Pre-award meeting will be held at which time the following will be addressed:
  - 1.1.1. Owner and HRCE's functions.
  - 1.1.2. The Consultant and the Consultant's functions.
  - 1.1.3. The General Contractor and the General Contractor's functions.
  - 1.1.4. Documentation requirements from the General Contractor.
  - 1.1.5. Obligees for Performance and Payment Bonds from Sub-contractors.
  - 1.1.6. Progress Claims.
  - 1.1.7. CO's & CCO's.
  - 1.1.8. Construction Schedule.
  - 1.1.9. Project Start-up.
  - 1.1.10. Job Meetings.
  - 1.1.11. Superintendent – General Contractor's Representative.
  - 1.1.12. Design / Administration authority.
  - 1.1.13. Owner's Representative.
  - 1.1.14. Special Consultants.
  - 1.1.15. Quality of Workmanship.
  - 1.1.16. Accountability.
  - 1.1.17. Harmonized Sales Tax.
  - 1.1.18. Contract Close-out Documentation.

### 2. Preconstruction Meeting

- 2.1. Within fifteen (15) days after award of Contract, arrange a meeting between the Consultant, Subcontractors, Project Superintendents, Inspection and Testing Company Representatives, and representatives of others whose coordination is required during construction.
- 2.2. Discuss at the meeting the means by which full cooperation and coordination of the participants during construction can be achieved.
- 2.3. Document the responsibilities and necessary activities of the participants during construction as discussed and distribute to each participant.
- 2.4. Establish procedures for maintenance and completion of Project record drawings specified in Section 01 77 00.
- 2.5. Review and establish methods of maintaining life safety and egress for the school occupants. Communicate these methods thoroughly with the School Principal.

### 3. Progress Meeting

- 3.1. Invite representatives of HRCE, to attend twice monthly site meetings called by the Contractor during the progress of the Work.

- 3.2. Inform HRCE of each meeting and of proposed agenda a minimum of five (5) days before meeting.
- 3.3. Submit proposed schedule of site meetings to Engineer and Owner.
- 3.4. Record, prepare and distribute minutes of each meeting to HRCE and to each other participant within 72 hours of meeting.
- 3.5. Ensure that all representatives who attend meetings have the authority to conduct business on behalf of firms they represent.
- 3.6. Details of Progress Meetings to be discussed at the project start-up meeting.

**4. Suggested Agendum (Preconstruction Meeting)**

- 4.1. Distribution and discussion of:
  - 4.1.1. List of major subcontractors and suppliers.
  - 4.1.2. Projected Construction Schedules.
- 4.2. Critical work sequencing.
- 4.3. Major equipment deliveries and priorities.
- 4.4. Project Coordination:
  - 4.4.1. Designation of responsible personnel.
- 4.5. Procedures and Processing of:
  - 4.5.1. Field decisions
  - 4.5.2. Proposal requests
  - 4.5.3. Submittals
  - 4.5.4. Change orders
  - 4.5.5. Applications for Payment.
- 4.6. Adequacy of distribution of Contract Documents.
- 4.7. Procedures for maintaining Record Documents.
- 4.8. Use of premises:
  - 4.8.1. Office, work and storage areas.
  - 4.8.2. Owner's requirements.
- 4.9. Construction facilities, controls and construction aids.
- 4.10. Safety/Tool Box Meetings.
- 4.11. Security procedures.
- 4.12. Housekeeping procedures.
- 4.13. Egress/life safety procedures

**5. Suggested Agendum (Progress Meetings)**

- 5.1. Review and approval of minutes of previous meeting.
- 5.2. Safety meeting minutes.
- 5.3. Review of work progress since previous meeting.
- 5.4. Field observations, problems, conflicts.
- 5.5. Problems which impede Construction Schedule.
- 5.6. Review of off-site fabrication, delivery Schedules.

- 5.7. Corrective measures and procedures to regain projected schedules.
  - 5.8. Revisions to Construction Schedules.
  - 5.9. Maintenance of quality standards.
  - 5.10. Pending changes and substitutions and effect on Construction Schedule.
  - 5.11. Other Business.
- 
- 6. Attend, with representatives of HRCE weekly meetings with the School Administration to review construction activities and concerns of Building Occupants.
  - 7. Quarterly meetings with Contractor and the HRCE / User during Warranty Period including major sub-trade contractors.
  - 8. Dates for meetings will be set at time of completion.

**END OF SECTION 01 31 19**

## SECTION 01 33 00 – SUBMITTAL PROCEDURES

### 1. General Requirements

- 1.1. Make submittals specified in this Section to Consultant unless otherwise specified, with additional submissions made, in manner that they direct, to other parties involved with construction of the Project as their interests are concerned. These parties are, but shall not be restricted to, consultants, jurisdictional authorities, and Subcontractors whose Work must be coordinated with Work related to Submittals.
- 1.2. Ensure that submissions are made to allow sufficient time for review without the construction schedule being delayed.

### 2. Document Submissions Required

- 2.1. At Commencement of Contract:
  - 2.1.1. Performance and Payment Bonds.
  - 2.1.2. Public Liability and Property Damage Insurance Certificates.
  - 2.1.3. List of Subcontractors by firm name.
  - 2.1.4. Construction Schedule and other required schedules and estimates.
  - 2.1.5. Site Specific Safety Plan/Safety Policy.
  - 2.1.6. Workers' Compensation Board status.
- 2.2. During Construction:
  - 2.2.1. Weekly progress reports.
  - 2.2.2. Job meeting reports and minutes.
  - 2.2.3. Updated construction schedules.
  - 2.2.4. Shop drawings as required.
  - 2.2.5. Inspection and test reports.
  - 2.2.6. Daily communication of Hot Work Permits as needed.
- 2.3. Submissions at completion of Work are specified in Section 01 77 00, Contract Closeout.

### 3. Administrative

- 3.1. Submit to Consultant submittals listed for review. 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 no claim for extension by reason of such default will be allowed.
- 3.2. Do not proceed with Work affected by submittal until review is complete.
- 3.3. Present shop drawings, product data, samples and in Imperial units.
- 3.4. Review submittals prior to submission to 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. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

- 3.5. Notify Consultant in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- 3.6. Verify field measurements and affirm that affected adjacent work is coordinated.
- 3.7. Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- 3.8. Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant's review.
- 3.9. Keep one review copy of each submission on site.

#### **4. Construction Schedules**

- 4.1. Submit proposed construction schedule at beginning of Project, as specified in Project Documents.
- 4.2. As construction progresses, submit up-dated construction schedules as specified in Project documents.

#### **5. Shop Drawings And Product Data**

- 5.1. The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- 5.2. Submit drawings stamped and signed by professional consultant registered or licensed in Province of Nova Scotia of Canada.
- 5.3. 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 design drawings and specifications.
- 5.4. Allow seven (7) days for Consultant's review of each submission. Do not proceed with work involving relevant products until completion of shop drawing review.
- 5.5. Adjustments made on shop drawings by Consultant are not intended to change Contract Price. If adjustments affect value of work, state such in writing to Consultant prior to proceeding with work.
- 5.6. Make changes in shop drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of revisions other than those requested.

Accompany submission with transmittal letter, in duplicate, containing:

- 5.6.1.** Date
- 5.6.2.** Project title and number
- 5.6.3.** Contractor's name and address
- 5.6.4.** Identification and quantity of each shop drawing, product data and sample.
- 5.6.5.** Other pertinent data.
- 5.7.** Submission to include:
  - 5.7.1.** Date and revision dates.
  - 5.7.2.** Project title and number.
  - 5.7.3.** Name and address of:
    - 5.7.3.1.** Subcontractor.
    - 5.7.3.2.** Supplier.
    - 5.7.3.3.** Manufacturer.
  - 5.7.4.** Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - 5.7.5.** Details of appropriate portions of Work as applicable:
    - 5.7.5.1.** Fabrication.
    - 5.7.5.2.** Layout, showing dimensions, including identified field dimensions, and clearances.
    - 5.7.5.3.** Setting or erection details.
    - 5.7.5.4.** Capacities.
    - 5.7.5.5.** Performance characteristics.
    - 5.7.5.6.** Standards.
    - 5.7.5.7.** Relationship to adjacent work.
- 5.8.** After Consultant's review, distribute copies.
- 5.9.** Submit for review one electronic copy in PDF file format of shop drawings for each requirement requested in specification Sections and as Consultant may reasonably request.
- 5.10.** Submit electronic copies of product data sheets for brochures for requirements requested in specification Sections and as requested by Consultant where shop drawings will not be prepared due to standardized manufacture of product.
- 5.11.** Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Consultant.
  - 5.11.1.** 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.
  - 5.11.2.** Testing must have been within three (3) years of date of contract award for project.

- 5.12. Documentation of testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- 5.13. Delete information not applicable to project.
- 5.14. Supplement standard information to provide details applicable to project.
  - 5.14.1. If upon review by Consultant, no errors or omissions are discovered or if only minor corrections are made, copies will be returned, and fabrication and installation of work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of work may proceed.
  - 5.14.2. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of work of sub-trades.
  
- 5.15. Shop Drawings are specified for submission under the following:
  - Section 03 20 00 Concrete Reinforcement
  - Section 05 12 23 Structural Steel
  - Section 05 31 00 Steel Deck
  - Section 05 50 00 Metal Fabrications
  - Section 06 10 11 Rough Carpentry
  - Section 06 40 00 Architectural Woodwork
  - Section 07 41 43 Aluminum Composite Panels
  - Section 07 46 13 Preformed Metal Siding
  - Section 07 55 00 Modified Bitumen Roofing System & Flashing
  - Section 07 84 00 Fire Stopping and Smoke Seals
  - Section 08 11 14 Steel Doors & Frames
  - Section 08 11 16 Aluminum Doors & Frames
  - Section 08 14 10 Wood Doors
  - Section 08 50 50 Aluminum Windows
  - Section 08 62 11 Vinyl Windows
  - Section 08 71 10 Door Hardware
  - Section 09 22 16 Non-Load Bearing Wall Framing
  - Section 09 30 13 Ceramic Tile
  - Section 10 11 13 Communication Boards
  - Section 10 11 23 Tackboards
  - Section 10 14 53 Traffic Signs
  - Section 10 28 10 Toilet & Bath Accessories
  - Section 10 50 00 Miscellaneous Specialties
  - Section 11 40 11 Food Services Catalogued & Custom Equipment
  - Section 12 21 13 Horizontal Blinds

Section 12 21 16 Roller Shades

Section 14 42 13 Wheelchair Platform Lift

All pre-manufactured Mechanical & Electrical items as noted in Mechanical & Electrical Divisions.

## 6. SAMPLES

- 6.1. Submit for review samples in duplicate as requested in respective specification Sections, as requested by the Consultant. Label samples with origin and intended use.
- 6.2. Deliver samples prepaid to Consultant's business address.
- 6.3. Notify Consultant in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- 6.4. Adjustments made on samples by Consultant are not intended to change.
- 6.5. Make changes in samples which Consultant may require, consistent with Contract Documents.
- 6.6. Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.
- 6.7. Samples are specified for submission under the following Sections:

Section 07 41 43 Aluminum Composite Panels

Section 07 46 13 Preformed Metal Siding

Section 08 14 10 Wood Doors

Section 08 50 50 Aluminum Windows

Section 09 30 13 Ceramic Tile

Section 09 51 13 Acoustical Ceiling Units

Section 09 65 19 Resilient Tile Flooring

Section 12 21 13 Horizontal Blinds

Section 12 21 16 Roller Shades

Refer to Mechanical & Electrical Divisions for sample requirements in those Trades.

## 7. Record Drawings

- 7.1. Record, as the Work progresses, changes and deviations in the location of Work concealed by the finished Work, and such other approved changes that occur during progress of Work, to ensure that an accurate record is provided for future maintenance and alterations.
- 7.2. White prints will be provided by the HRCE for use in preparing record drawings. Record changes in the Work on these prints in red ink.
- 7.3. Dimension location of concealed Work in reference to building walls, and elevation in reference to floor elevation. Indicate at which point dimension is taken to conceal Work. Dimension all terminations and offsets of runs of concealed work.
- 7.4. Record work constructed differently than shown on Contract Documents, changes in the work caused by site conditions, by Owner, Consultant, Contractor and Subcontractor originated

changes, and by site instructions, supplementary instructions, field orders, change orders, addenda, correspondence and directions of jurisdictional authorities.

- 7.5. Record location of mechanical and electrical services, piping, valves, conduits, pull boxes, junction boxes and similar work not clearly in view, and position of which is required for maintenance, alteration work and future additions. Do not conceal critical work until its location has been recorded.
- 7.6. Identify record drawings as a "Project Record Copy". Maintain in good condition, do not use for construction purposes and make available to Consultant at all times.
- 7.7. Submit record drawings at completion of Work. Final acceptance of the Work will be predicated on receipt and approval of record drawings.

## **8. Extra Stock**

- 8.1. Supply extra stock at completion of Project as specified in other Sections of the Project Manual.
- 8.2. Deliver extra stock as directed by the Architect to location he designates.
- 8.3. Extra stock is specified to be supplied in the following Sections:

Section 09 30 13 Ceramic Tile

Section 09 51 13 Acoustical Ceiling Units

Section 09 65 19 Resilient Tile Flooring

Section 09 91 23 Painting

Refer to Mechanical & Electrical Divisions for Extra Stock requirements in those Trades.

## **9. Maintenance Manual & Operating Instructions**

- 9.1. Submit three (3) copies of Maintenance Manual with application for completion certificate.
- 9.2. Include in Maintenance Manual one (1) copy of each final approved shop drawing issued for Project on which have been recorded changes made during fabrication and installation caused by unforeseen conditions.
- 9.3. Submit extended guarantees together in one (1) report binder.
- 9.4. The Manuals shall:
  - 9.4.1. Consist of a hard-cover, black, vinyl-covered, loose-leaf, letter-size binder.
  - 9.4.2. Have a title sheet, or sheets preceding data on which shall be recorded Project name, Project number, date, list of contents, and Contractor's and Subcontractors' names.
  - 9.4.3. Be organized into applicable Sections of Work with each Section separated by hard paper dividers with plastic covered tabs marked by Section.
  - 9.4.4. Contain only typed or printed information and notes, and neatly drafted drawings.
  - 9.4.5. Contain maintenance and operating instructions on all building, and mechanical and electrical equipment.
  - 9.4.6. Contain maintenance instructions as specified in various Sections.

- 9.4.7. Contain brochures and parts lists on all equipment.
- 9.4.8. Contain sources of supply for all proprietary products used in the Work.
- 9.4.9. Contain lists of supply sources for maintenance of all equipment in Project of which more detailed information is not included above.
- 9.4.10. Contain finished hardware schedule.
- 9.4.11. Contain charts, diagrams and reports specified in Mechanical & Electrical Divisions.

## 10. Extended Warranties

- 10.1. Submit the extended warranties listed in this Article and as specified in each applicable Section of this Project Manual.
- 10.2. Extended warranties shall commence on termination of the standard one-year warranty granted in this Contract.
- 10.3. Submit each extended warranty on a standard Form of Warranty, a sample of which is included in this Section.
- 10.4. Secure each extended Warranty by a Maintenance Bond in an amount indicated.
- 10.5. Submit extended warranties for:

Section 06 40 00 Architectural Woodwork – extended 4 years

Section 07 41 43 Aluminum Composite Panels – extended 10 years (panel finish)

Section 07 55 00 Modified Bitumen Roofing System & Flashing:

- 2 year CRCA materials and workmanship against leaks and blow off
- 10 year material warranty the membrane will perform as a roofing material
- 1 year CRCA warranty against defects of materials and workmanship for the sheet metal work.

Section 07 92 10 Joint Sealants – extended 5 years

Section 08 11 16 Aluminum Doors & Frames – extended 4 years

Section 08 14 10 Wood Doors – extended 4 years

Section 08 50 50 Aluminum Windows – extended 4 years

Section 08 62 11 Vinyl Windows – extended 5 years

Section 08 71 10 Door Hardware – various, refer to that Section

Section 09 30 13 Ceramic Tile – extended 4 years

Section 09 51 13 Acoustical Ceiling Units – extended 4 years

Section 09 65 19 Resilient Tile Flooring – extended 4 years

Section 10 11 13 Communication Boards – extended 24 years

Section 10 11 23 Tackboards – extended 9 years

Section 12 21 13 Horizontal Blinds – extended 5 years

Section 12 21 16 Rollers Shades – extended 5 years

Section 14 42 13 Platform Lift – extended 5 years

Refer to Mechanical & Electrical Divisions for extended Warranty requirements in those trades.

**11. Inspection Laboratory Reports**

- 11.1.** Submit copies of inspection and test reports obtained by the Contractor and Subcontractors for their Work or for Jurisdictional Authorities, if requested by Consultant.
- 11.2.** Submit reports in accordance with requirements specified in Section 01 41 00.

**12. Documentation On Suppliers & Manufacturers**

- 12.1.** Provide information under headings identifying the following: Associated Technical Section, Manufacturer, Supplier, Contact Name, and Phone Numbers.

**SAMPLE FORM OF WARRANTY FOLLOWS THIS PAGE**

## Sample Form for Warranty

**Date** .....

**Client** .....

**Project** .....

.....

**Warranty** .....  
(title of work)

We hereby undertake to warrant all materials supplied and installed under our Contracts and include the providing of necessary materials and labour to cover the result of faulty materials or workmanship. Upon written notification from Client or the Architect that the above work is defective any repair or replacement work required shall be to the Architect's satisfaction at no cost to the Client. This Warranty shall not apply to defects caused by the work of others, maltreatment of materials, negligence or Acts of God. This Warranty shall remain in effect for the total period from the acceptance of the Work to (...date...), irrespective of the date of completion or the beneficial use by the Owner.

**Signature** .....

**Authorized Signing Officer** .....

**Name of Firm** .....

**Address** .....

END OF SECTION 01 33 00



## SECTION 01 35 13 – APPENDIX A - SPECIAL PROJECT PROCEDURES

### 1. Introduction

- 1.1. School construction, renovation and maintenance projects are scheduled every year as a normal and necessary course of business by operations departments in each Nova Scotia Centre for Education. Building modifications, repairs and additions/demolitions to buildings may impact the school environment without appropriate controls. With increased controls based primarily on the CSA standards implementation, proper scheduling and clear communication on adequate controls can be put into place to eliminate/minimize the impact to all occupants.
- 1.2. Projects of this nature may generate varying levels of dusts, noises and odors. It is possible, unknown/unforeseeable environmental contaminants, such as spills, mold, fumes, lead or asbestos exposure maybe identified.
- 1.3. To successfully complete work within the school environment, it is necessary to plan and implement appropriate containment and control strategies. This document is developed to provide a minimum standard for contaminant controls for various types of projects in schools. These standards are in addition to and should complement all legislated protocols for working with regulated materials such as asbestos, lead paints, PCB's etc.
- 1.4. Executing a successful project will depend primarily on clear, concise communication. This may involve a number of parties (Project Manager, Operations staff, School Administration and Health & Safety staff and Joint Occupational Health & Safety Committee).

### 2. Communication Plan

- 2.1. The most critical element of any project management plan is effective communication between all stakeholders. Communication between the Operations project manager/supervisor, the contractor and school administrators before the start of a project is very important. This meeting is meant to explain the scope, schedule and risk assessment for the project. The meeting will also help establish clear expectations when managing planned and unplanned exposure risks associated with contaminant controls.
- 2.2. The communication plan shall include:
  - 2.2.1. A description of potential contaminants, which may include but is not limited to:
    - 2.2.1.1. Particulates (dirt, concrete/silica, steel, fiberglass, wood dust, ash, cellulose, etc.)
    - 2.2.1.2. Moisture: external water infiltration, internal system leaks (domestic water, sanitary, storm, sprinkler)
    - 2.2.1.3. Noise from equipment/tool operation,
    - 2.2.1.4. Fumes/odors from equipment exhaust, boiler exhaust, septic waste, chemical/adhesives, etc.

- 2.2.1.5. Hazardous materials including, asbestos, PCB, mercury, lead, fuel oil, fungi/mould, etc.
          - 2.2.1.6. Excessive heat/cold
        - 2.2.2. A description of the control measure which may include but not be limited to:
          - 2.2.2.1. Isolation within an enclosure (water, noise, hazardous materials)
          - 2.2.2.2. Ventilation and filtration
          - 2.2.2.3. Dehumidifiers/blowers (moisture)
          - 2.2.2.4. Personal protective equipment
          - 2.2.2.5. Schedule outside or inside school hours
          - 2.2.2.6. Sound dampeners
          - 2.2.2.7. Monitoring
          - 2.2.2.8. Security
        - 2.2.3. Other Hazards created by the work, including but not limited to fire safety and the need to alter fire safety plans.
- 2.3. For small routine work orders the communication plan may only involve one tradesperson and the school principal or designate. This communication is equally as important for management of contaminant controls.

### **3. Contaminant Control Management**

- 3.1. Regardless of the contaminant or control measure used, the following procedures shall apply for every project:
  - 3.1.1. Every project, including all routine work requests, shall be assessed, as per this document, by appropriate personnel for potential contaminant risk.
  - 3.1.2. Clear lines of communication must be established between project personnel, site supervisor or project manager and the school administration.
  - 3.1.3. Control strategies as per this document, shall be, communicated to workers as well as the site JOHSC and implemented prior to starting the work.
  - 3.1.4. Where isolation is used as a control, all entry points must be clearly posted to describe the purpose of the enclosure and limitations of access.
  - 3.1.5. During the execution of the project, the control measures must be regularly inspected and maintained before the start of each work shift, and throughout the shift as required.
  - 3.1.6. A process for stop work and remediation orders must be established to ensure the project manager; site supervisor and school administrator have a means to cease project operations when a contaminant control breach may impact the school environment. Breached control measures must be reported immediately to HRCE project manager upon discovery. He/she will be responsible to communicate to the school principal or designate. Work shall be stopped immediately until the control measures are re-established.

- 3.1.7.** Access to the controlled work site is only permitted by authorized personnel. The project supervisor or designate shall determine appropriate personal protective equipment (PPE) and necessary worker orientation.

#### **4. Particulate Control**

- 4.1.** Exposure to minimal levels of dust is a normal condition in most outdoor and indoor environments and is typically controlled inside a building through building ventilation, filtration and routine housekeeping measures. However, as noted, construction projects generally create elevated dust levels in work areas, whether inside or outside of a building.
- 4.2.** Operational Services Managers must ensure maintenance staff and contracted service providers implement dust control measures appropriate for the type and scope of work being performed. This will include assessing the type and amount of dust being created as well as the location of the work being conducted.
- 4.2.1.** Interior Construction Projects:
- 4.2.2.** Construction projects may be described as projects that may include window replacement, wall creation/demolition, etc.
- 4.3.** As a minimum for these types of construction projects, all interior entry points into a construction zone must be effectively sealed. The barrier must prevent contaminants from the work area to be distributed to other areas of the school. Appropriate signage must be posted to indicate only authorized persons are permitted access.
- 4.4.** Entrance design could range from a two flap plastic tarp door to a fully constructed sealed entry door with negative hepa-filtered ventilation on the construction side of the barrier.
- 4.5.** Exterior Construction Projects:
- 4.5.1.** Exterior work shall be performed so as not to affect the safety of building occupants. It will also provide controls to avoid impact to adjacent properties. Depending up on the results identified in the risk assessment, at a minimum consideration must be given to prevent dust from entering into the school environment. This may be controlled through isolation, dampening application, closing building AHU and window/door openings.

#### **5. Noise Control**

- 5.1.** Hearing plays an essential role in communication, speech and language development and learning within a school environment. During construction the contractor is responsible for ensuring acceptable noise levels will be adhered to for the HRCE staff and students within the building. Noise related to a project may prove to be very distracting for staff and students. To minimize distractions and interruptions in student learning the following are important to consider:
- 5.1.1.** Contractors are responsible to ensure appropriate noise control measures are taken
- 5.1.2.** "No work" periods may need to be incorporated into construction schedules

- 5.1.3. Work causing a noise disruption may need to take place during unoccupied times and/or during pre-determined acceptable times of the day (i.e. before and after class times)
- 5.1.4. It may be necessary for the School Administrator to make a request to the HRCE Project Manager or the Contractor to exclude undertaking certain noisy activities during particular periods and/or activities.

## 6. Moisture Control

- 6.1. Moisture levels are to be controlled during construction and maintenance activities. Moisture levels above normal may impact the air in the room and/or building and may also penetrate building materials giving the potential to lead to mould growth.
- 6.2. Certain activities (i.e. tape and mud of drywall, painting, pressure washing, concrete cutting with water or other water-based dust-suppression) introduce high amounts of moisture into the room environment and ventilation and or drying is required to control local moisture.
- 6.3. An enclosure properly set-up to contain other contaminants will similarly contain/control high levels of airborne moisture. A wet-vac should be available on-site for activities which have a risk of water spillage of more than 5 gallons at any instance.
- 6.4. Standing and or stagnate water must be avoided on construction sites, for a number of reasons, including, but not limited to; insects breed in these bodies of water, the water may give off odours, it is a nuisance to walk through, and it may be an ice hazard in cold weather.
- 6.5. It is important that all water leaks and flooding are reported immediately to the HRCE's project manager and building supervisor. Where works to existing "plumbing" is to occur the water lines (potable, heating, fire suppression) must be isolated and drained (de-energized/de-pressurized) following Lock Out - Tag Out procedure. Adequate supplies such as buckets and absorbents should be present when drains are not available to drain a line.
- 6.6. When an interruption to the water supply, potable or service, is to occur then the "owner's representative" and building supervisor should be notified 24 hours in advance. Bottled water provision may be required.
- 6.7. Materials used in the construction and or maintenance activities are to be stored in dry areas. The introduction of materials to the activities with moisture levels above the acceptable (XXX%)CNBC states for wood, on dry weight basis, a max of 19%, I can't find info on drywall but assume it is much lower range is prohibited as these materials are highly susceptible to colonization by mould spores.

## 7. Fumes

- 7.1. Fumes may be produced on a project site for a variety of reasons such as use of motorized equipment, off gassing of sealants, adhesives and finish products, cutting/torching processes, exposure of sanitary systems, process ignition gases such as propane and acetylene, proximity of project temporary washrooms, radon, etc.
- 7.2. The impact of fumes on occupants may range from discomfort to health risk, to life safety risk.

- 7.3. The project manager or supervisor must ensure that all potential fume sources are identified and remedial or control measures included in the scope of work by the contractor.
- 7.4. Monitoring equipment may be required to determine for example radon exposure or safety of confined space access.

## 8. Activity Assessment

- 8.1. Activities that may produce contaminants which require control may be considered as low, medium and high impact.
- 8.2. Low impact activities include routine maintenance and repairs that may create localized dust or odors or brief periods of noise which are not considered harmful to occupants but may be a nuisance which requires minimal control. These may include activities such as opening ceiling tiles or gyproc walls, replacing a plumbing fixture, paint touch ups, drilling through a wall, etc.
- 8.3. Medium impact activities include larger repair jobs or longer duration projects that will create more wide spread levels of contaminant which must be controlled to prevent exposure to building occupants. Boiler cleaning, ceiling replacement, long periods of hammer drilling, etc.
- 8.4. High impact activities include large demolition and construction projects, or jobs with exposure to contaminants that are a risk to health or life safety such as asbestos remediation, mould abatement, lead paint clean up, etc.

## 9. Hazard Assessment

- 9.1. A hazardous assessment is required to be completed for each job to ensure hazards are identified and corresponding controls are implemented. Depending upon the circumstances at the site it may be necessary to upgrade and/or add other precautions.
- 9.2. Determine the most appropriate hazard classification and apply the corresponding protocols. The attached hazard assessment identifies the minimum controls that must be in place during the corresponding activities. Depending on the specific circumstances at a site further controls may be required. When the hazards are deemed to be in the C or F category the form including specific controls must be submitted to the HRCE for review, prior to commencing work. The contractor may still be required to complete their own hazard assessment of the job/work.

## 10. Contaminant Controls Procedure for initiating work for all Contaminant Controls:

### 10.1. Contaminant Control I

- 10.1.1. The tradesperson or project manager for the HRCE will discuss the details, including the scope and any impacts of the job/project with the principal.
- 10.1.2. Ensure fire exiting requirements and life safety systems are addressed or adequate mitigating plans are implemented for the building, construction staff and building occupants.
- 10.1.3. Presence of lead paint or ACM's (Asbestos Containing Materials) must be determined prior to the start of any job. Specific protocols or Codes of Practice may apply.

- 10.1.4. Consideration will be given for work that is anticipated to generate significant noise, odours or VOC's (Volatile Organic Compounds) and this will be scheduled outside of school hours or during times when the noise will not disrupt occupant activities. This will require coordination with the Principal.
  - 10.1.5. The work area shall be isolated where possible. This may be achieved at varying levels, by closing doors and opening outside windows for ventilation or by installing appropriate hoarding and negative pressure units to ensure contaminants are not circulated throughout the school causing further health and safety concerns.
  - 10.1.6. Dust shall be minimized during the activity. When drilling, sanding or cutting is taking place, wetting the area may be necessary to reduce dust.
  - 10.1.7. Good housekeeping practices shall be maintained at all times on the work site. Bag and remove dust and debris from the building as soon as possible.
  - 10.1.8. Possible environmental impacts shall be managed and minimized. If work uncovers environmental contaminants or suspected contaminants such as oil spills (current or historic) or potentially friable asbestos materials (check the school asbestos audit) that may be disturbed, this information shall be brought to the attention of the HRCE's employee responsible for the project so that appropriate actions can be taken.
  - 10.1.9. When the activity is completed the work area shall be inspected and cleaned. Dust and debris shall be removed from the area and all efforts will be made to return items to their pre-maintenance activity location.
  - 10.1.10. The Principal shall be notified that the work is completed.
- 10.2. Contaminant Control II** - All Contaminant Control I measures shall apply, as well as;
- 10.2.1. Cover furniture, bookshelves and teaching materials with plastic sheets.
  - 10.2.2. Water misting while performing dust generating activities may be required.
  - 10.2.3. Seal un-used doors. Seal wall penetrations, electrical outlets, or any other source of air leaks in the construction area.
  - 10.2.4. Seal exhaust air vents in construction area and open the windows. If possible shut down air handling system in the area for duration of project.
  - 10.2.5. A walk out mat at exterior of exit door to trap dust may be required.
- 10.3. Contaminant Control III** - All Contaminant Control I and II measures shall apply, as well as;
- 10.3.1. Install an impermeable dust barrier from the true ceiling to the floor consisting of two layers of 6 mil fire retardant polyethylene or solid wall and sealed door. The wall shall remain in place until the job is finished and the clean-up is completed.
  - 10.3.2. Seal all wall penetrations.
  - 10.3.3. Seal off all return and supply air handling ducts and close all windows.
  - 10.3.4. Turn off the air handling system in the area of construction.
  - 10.3.5. Maintain negative air pressure in the construction area using HEPA filter equipped exhaust ventilation. The pressure differential between the project area of contamination and the building's occupied areas shall be demonstrable by a means approved by the HRCE employee responsible for the project.

- 10.3.6. Ensure that the air is exhausted directly outside and away from intake vents.
- 10.3.7. Vacuum all horizontal surfaces including drop cloths with a hepa vacuum.
- 10.3.8. Remove drop cloths.
- 10.3.9. Vacuum again all horizontal surfaces with HEPA Vacuum.
- 10.3.10. Restore ventilation.
- 10.3.11. Remove enclosure and equipment.

**10.4. Control IV: (External Work)**

- 10.4.1. External work may impact building interior or occupants.
- 10.4.2. To reduce the impact to building interior or occupants, it may be necessary to contain the work area from impacting building interior. This may include closing or opening windows, tarping ceilings to capture debris or water, temporary relocation of occupants or ventilation controls.
- 10.4.3. The job supervisor shall consider weather conditions and forecast to reduce the effect of any weather impacts to the building materials or building occupants.
- 10.4.4. It may be necessary to use protective tarps and ground cover sheets below equipment and work areas to contain building debris such as paint chips, materials, dust or oil from equipment.
- 10.4.5. When the job is completed and the tarps have been lifted, inspect the ground around the job for debris and clean as necessary.

**Fire Protection**

- 10.5. Type V: General Fire Protection
  - 10.5.1. Ensure fire exiting requirements and life safety systems are addressed or adequate mitigating plans are implemented for the building, construction staff and building occupants. Staff must be aware of temporary modifications to fire safety plans.
  - 10.5.2. MSDSs for all materials to be used must be reviewed and available on site.
  - 10.5.3. Construction materials stored outside must be a minimum distance of ten feet from the building and be in a secured area.
  - 10.5.4. Flammable or Combustible liquids must be stored as per Fire Code requirements. All flammable and combustible liquids or materials must be kept in a secure area at all times.
- 10.6. Control VI: Fire Protection (minor hot work) - All Contaminant Control V shall apply as well as;
  - 10.6.1. Notify the Principal that a risk of fire has increased and the area in which the hot work will occur.
  - 10.6.2. Refer and implement the HRCE's hot work permit process. At a minimum the following should be considered;
    - 10.6.2.1. Sweep the work area and remove all unnecessary materials in the vicinity; particularly all combustible and flammable materials and liquids shall be removed from the area (35 feet).
    - 10.6.2.2. Have an appropriate size fire extinguisher available.



- 10.6.2.3.** Inspect the work location for areas (such as a hole in the wall) where hot material or sparks could fall and smolder and close them off so that any hot debris can only fall within your field of view.
- 10.6.2.4.** If it is possible that the flame will go past the object being welded or soldered and excessively heat a flammable or combustible material, then either protect that material with a non-flammable material or wet the material and keep it wetted during the use of heat or grinding.
- 10.6.2.5.** Remain in the area while the joint and/or heated materials cool to room temperature (ambient) while checking for the smell or appearance of smoke in the area.
- 10.6.2.6.** Stay in the area for at least 2 hours and then re-inspect for any smell or appearance of smoke.
- 10.6.2.7.** Ask another staff person to inspect the area for the smell or appearance of smoke. Record who you asked to do the final inspection.
- 10.6.3.** Type VII: Fire Protection (hot work w fire watch) - All Contaminant Control V and VI shall apply as well as;
- 10.6.4.** Notify the Principal that a risk of fire has increased and the area in which the hot work will occur. If any life safety system components (sprinkler, detectors, fire alarms) are not function, hot work should not proceed until these systems are functioning unless fire watch procedures for life systems are followed. See Activation of Fire Watch for Life Safety Systems checklist. Appendix...XX
- 10.6.5.** Refer and implement the HRCE's hot work permit process. At a minimum the following should be considered;
  - 10.6.5.1.** Cover all floor openings with fire stop material. Seal duct work openings with metal covers or blankets and close all doors.
  - 10.6.5.2.** Ensure that there are no potentially explosive atmospheres in the area.
  - 10.6.5.3.** Hot work on vessels, pressure tanks or boilers, use only contractors who are qualified by nationally or internationally recognized boiler and pressure vessel code.
  - 10.6.5.4.** Notify the local fire department of the type of work and the work schedule.
  - 10.6.5.5.** Before hot work is started, designate one employee responsible to complete the fire watch: while work is in progress, during lunch breaks and other breaks and for one hour after all flames are extinguished for the day and monitor the area for an additional two hours. After three hours after the last flame has been extinguished, have a second employee do a final survey of the area for smells or evidence of smoldering or fire and record the inspection.



**APPENDIX**  
**Fire Watch Activation Checklist**

1. Documentation (identify locations to be checked on an hourly basis, provide contact information for relevant HRCE staff and outside agencies} HRCE provided template to be used for documentation.
2. Procedure reviewed with Custodian or individual responsible for fire watch. Any high-risk areas shall be identified to be highlighted on the documentation page and checked during the rounds.
3. Staff working in the building have been notified of the Fire Watch and that they are responsible to monitor areas for signs of fire or smoke and have been reminded of required actions to take according to the school fire safety plan.
4. Staff responsible for fire watch have been trained in how to use a fire extinguisher. (PASS)
5. Staff responsible for the fire watch have a means of communication (cell phone or walkie-talkies)
6. Staff responsible for the fire watch are aware of the procedure for initiating fire alarm and what systems are functioning. i.e. systems (sprinklers, alarm panel or if school has monitoring company or if calling 911 is required)
7. The School Insurance Program (SIP) Emergency Information Line has been notified 1-902-448-2840
8. All relevant information has been documented in the school's fire books. Including date, time and reason for fire watch.

**Fire Watch De-Activation Checklist**

1. Document the date, time and actions taken to remedy the deficiency requiring the fire watch.
2. School Insurance Program (SIP) has been notified.
3. Copy of the Fire Watch documentation is kept in the fire book and the original is sent to the HRCE Project Representative.

**END OF SECTION 01 35 13**

## SECTION 01 35 29 - OCCUPATIONAL HEALTH & SAFETY REQUIREMENTS

### 1. References

- 1.1. CSA S269.1-1975 Falsework for Construction Purposes.

### 2. CONSTRUCTION SAFETY MEASURES

- 2.1. Observe construction safety measures of:
  - 2.1.1. National Building Code 2010, Part 8
  - 2.1.2. National Fire Code of Canada
  - 2.1.3. Provincial Government, including but not limited to the:
    - 2.1.3.1. Occupational Health & Safety Act revised Statutes of Nova Scotia 1996, Chapter 7 and regulations.
    - 2.1.3.2. Workers' Compensation Act
    - 2.1.3.3. Fire Protection Act
    - 2.1.3.4. Dangerous Goods Transportation Act
- 2.2. In case of conflict or discrepancy the more stringent requirement shall apply.
- 2.3. Ensure that employees working on this specific project have met training requirements as legislated by the Nova Scotia Occupational Health & Safety Act and its regulations.
- 2.4. Where reference is made to jurisdictional authorities, it shall mean all authorities who have within their constituted powers the right to enforce the laws of the place of the building.

### 3. Equipment & Tools

- 3.1. Each user of equipment or tools shall be responsible to examine for sufficiency before use. Make equipment and tools safe if necessary.

### 4. WHMIS

- 4.1. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets.
- 4.2. Have a copy of WHMIS data sheets available at the workplace on delivery of materials.

**5. Hazardous Material**

- 5.1. Should material resembling hazardous materials other than those identified with the Contract Documents, including but not limited to spray or trowel applied asbestos, be encountered in course of work; stop work immediately. Do not proceed until written instructions have been received from Consultant.
- 5.2. Where work entails use, storage, or disposal of toxic or hazardous materials, chemicals and or explosives, or otherwise creates a hazard to life, safety, health, or the environment; work shall be in accordance with the Jurisdictional Authority.

**6. Site Cleaning**

- 6.1. Except where special permission is obtained, maintain clear access on public sidewalks and roads.
- 6.2. Maintain walks and roads clear of construction materials and debris, including excavated material. Clean walks and roads as frequently as required to ensure that they are cleared of materials, debris and excavated material.

**7. Fire Safety Requirements**

- 7.1. Enforce fire protection methods, good housekeeping and adherence to local and Underwriter's fire regulations including, but not limited to, Fire Protection Act and the Provincial Building Code Act. Provide UL approved fire extinguishers, and other fire- fighting services and equipment, except where more explicit requirements are specified as the responsibility of individual Sections.
- 7.2. Smoking is not permitted on school property.
- 7.3. Advise Fire Chief in the area of Work of any work that would impede fire apparatus response, including but not limited to violation of minimum overhead clearance prescribed by the fire chief, erecting of barricades and digging of trenches and in areas where work is being done.
- 7.4. Ensure nothing subverts the integrity of fire protection provided for the building structure.

**8. Reporting Fires**

- 8.1. Know the location of the nearest fire alarm box and telephone, including the emergency phone number.
- 8.2. Report immediately all fire incidents to the fire department as follows:
  - 8.2.1. Activate nearest fire alarm box, or
  - 8.2.2. Telephone local fire department
  - 8.2.3. Where fire alarm box is exterior to building, the person activating the fire alarm box shall remain at the box to direct Fire Department to scene of the fire.
  - 8.2.4. When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

## **9. Safety Document Submission**

- 9.1.** Ensure Safety Document Submission applies to Work of this specific project and site.
- 9.2.** Submit two (2) copies of Project Safety Document at the Pre-Construction Meeting. Do not commence Work nor deliver material on-site prior to submission.
- 9.3.** Include in Safety Document submission specific information detailing the methods and procedures to be implemented ensuring adherence to the acts, regulations, codes and policies specified in this section and to:
  - 9.3.1.** Ensure the Health & Safety of persons at or near the Work; including, but not limited to, the Public.
  - 9.3.2.** Ensure the measures and procedures of the regulatory agencies specified are carried out.
  - 9.3.3.** Ensure every employee, self-employed person and employer performing Work under this contract complies with the regulatory agencies specified.
  - 9.3.4.** Where changes to the methods and procedures in the execution of work change submitted safety methods and procedures, modify submitted Safety Documentation and submit modifications, in writing to the Consultant and Owner prior to implementation.

## **10. Safety Document Organization**

- 10.1.** Organize information in the form of an instructional manual as follows:
  - 10.1.1.** Place in binders of commercial quality, accommodating 8½" x 11" paper size.
  - 10.1.2.** Cover: Identify binder with typed or printed title 'Project Safety Document' and list the title of project.
  - 10.1.3.** Provide tabbed fly leaf for each separate heading, with typed heading on tab.
  - 10.1.4.** Where drawings are within the safety document, provide with reinforced punched binder tab. Bind in with text; fold in larger drawings to size of text pages.
  - 10.1.5.** Arrange content under Safety Document headings specified herein.

**11. Safety Document Headings**

**11.1. Employee Safety Training**

**11.1.1.** Place, under this heading, a statement indicating employees working on this specific project have met specified training requirements, if required.

**11.2. Company Safety Policy**

**11.2.1.** Place, under this heading, information pertaining to the company's policy and commitment to Occupational Health & Safety, including the responsibilities of management, supervisors and workers.

**11.3. Company Safety Rules in General Terms**

**11.3.1.** Place, under this heading, information of a general, global nature, applying to every work environment where the company has staff and pertaining to rules directing compliance to policy. For example state company safety rules with respect to use of hard hats, safety glasses, safety foot ware, CSA approval on such items, and use of alcohol or non-prescription drugs.

**11.4. Hazard Assessment**

**11.4.1.** Place, under this heading, information identifying possible hazards specific to this project and identify safe methods and procedures for the execution of work to ensure safety in the workplace.

**11.4.2.** Arrange contents of this heading by technical section number of the project manual.

**11.5. Emergency Action Plan**

**11.5.1.** Place, under this heading, information detailing action to be taken in the event of various emergencies.

**11.5.2.** Arrange content under the following sub-headings:

**11.5.2.1. First Aid**

11.5.2.1.1. Include information concerning establishment of a First Aid Station, related supplies, staff awareness of location and staff training in First Aid Care of Casualties.

**11.5.2.2. Contact of Emergency Support Groups:**

11.5.2.2.1. Include relative information including phone location for emergency use, the emergency telephone numbers and their location for the various organizations which must be contacted in case of an emergency, and staff training in procedures.

Cessation of Work:

11.5.2.2.2. Include relative information how work cessation during emergencies is handled and communicated to persons present on site.

**11.6.** Joint Occupational Health & Safety Committee/Representative:

**11.6.1.** Place under this heading information detailing membership and terms of reference.

**OCCUPATIONAL HEALTH & SAFETY SUMMARY FOLLOWS THIS PAGE**

**Occupational Health & Safety Summary** (to be submitted with each monthly Progress estimate)

The following information summarizes Occupational Health & Safety activities on the project conducted by the Contractor during the month and includes activities of Subcontractors. Activities include all matters prescribed by the Occupational Health & Safety Act and Regulations and the submitted Occupational Health & Safety Document for the Project.

**Indicate the applicable # number below:**

**List new Contractors on Site below:**

# \_\_\_\_ new contractors on site,

\_\_\_\_\_

# \_\_\_\_ orientations

\_\_\_\_\_

# \_\_\_\_ toolbox talks

\_\_\_\_\_

# \_\_\_\_ safety meetings

\_\_\_\_\_

# \_\_\_\_ Joint Occupational Health  
and Safety Committee meetings

\_\_\_\_\_

# \_\_\_\_ hazard assessments

# \_\_\_\_ formal written inspections

# \_\_\_\_ warnings issued to employees or subcontractors

# \_\_\_\_ other, explain \_\_\_\_\_

The Contractor certifies that the above noted activity list is accurate and that during the month:  
Check

All activities on the Project were found to be in compliance with the Occupational Health & Safety Act and Regulations

Some activities on the Project were not found to be in compliance with the Occupational Health & Safety Act and Regulations but were adequately corrected in an appropriate time frame. Explain

\_\_\_\_\_

Prepared by

Certified by

\_\_\_\_\_  
(Contractor Project Manager)

\_\_\_\_\_  
(Contractor Senior Management)

**END OF SECTION 01 35 29**

## SECTION 01 37 00 - SCHEDULE OF VALUES

### 1. Related Documents

- 1.1. General Conditions of Contract.

### 2. General

- 2.1. Submit to the Architect, and Owner, Schedule of Values, within twenty (20) days after signing Agreement.
- 2.2. Use Schedule of Values as basis for Contractor's Progress Claim.

### 3. Form Of Submittal

- 3.1. Form included at end of this Section.

### 4. Preparing Schedule Of Values

- 4.1. Itemize separate line item cost for work required.
- 4.2. Round off figures to nearest ten (10) dollars.
- 4.3. The sum of all values listed in the schedule shall equal the total contract sum.

### 5. Review And Submittal

- 5.1. After review by Architect and Owner, revise and resubmit Schedule as directed.
- 5.2. The form shall be completed and supported by such evidence as to its correctness as the Architect may reasonably direct.



**SCHEDULE OF VALUES**

**#4238 – Roof Replacement and Localized Envelope Repairs –**  
**Project Name** Rockingstone Heights School

**Consultant** Rimkus Consulting Group Canada Inc.

**Contractor** \_\_\_\_\_

**Date** \_\_\_\_\_

Halifax Regional Centre for Education – Schedule of Values		
Contract Item	Percentage	Dollar Value
Mobilization, bonding / insurance, safety, set up safety fencing and window access		
Materials - approved materials delivered to site . Approved area by HRCE		
Roof Replacement Work specified for Roof Area 1.1(C), 2.1(B) and 2.2(A):		
New metal siding, new metal door, and new exterior ladder		
Close out documentation including copy of warranty		
<b>Total</b>	<b>100 %</b>	

END OF SECTION 01 37 00

## SECTION 01 41 00 - REGULATORY AGENCIES

### 1. Jurisdictional Authorities

- 1.1. Where reference is made to jurisdictional authorities, it shall mean all authorities who have within their constituted powers the right to enforce the laws of the place of building.

### 2. Definitions

- 2.1. The "Constructor" named in the Construction Safety Act, Chapter 52, Revised Statutes of Nova Scotia, as amended by 1972, Chapter 25; and Construction Safety Regulations, pursuant to Chapter 52 R.S.N.S., including any amendments, shall mean the "Contractor" for the Work performed under this Specification.

### 3. Fire Prevention, Safety & Protection

- 3.1. General Construction Safety Measures:
  - 3.1.1. Observe safety measures of the
    - 3.1.1.1. National Building Code 2010, Part 8.
    - 3.1.1.2. National Fire Code of Canada.
    - 3.1.1.3. Provincial Government, including but not limited to the Occupational Health & Safety Act Revised Statutes of Nova Scotia 1996, Chapter 320, and the Construction Safety & Industrial Safety Regulations made pursuant to the Occupational Health and Safety Act, 1996.
    - 3.1.1.4. Workers'/Workmen's Compensation Board.
  - 3.1.2. In case of conflict or discrepancy the more stringent requirement shall apply.
  - 3.1.3. Maintain clear emergency exit paths for personnel.
- 3.2. Except where special permission is obtained, maintain clear access on public sidewalks and roads.
- 3.3. Maintain walks and roads clear of construction materials and debris, including excavated materials. Clean walks and roads as frequently as required to ensure that they are cleared of materials, debris and excavated materials.
- 3.4. WHMIS:
  - 3.4.1. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health & Welfare Canada.
  - 3.4.2. Have a copy of WHMIS data sheets available at the workplace on delivery of materials.

### **Blockage of Roadways**

- 3.5.** Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by fire chief, erecting of barricades and the digging of trenches.

## **4. Smoking Precautions**

- 4.1.** Observe, at all times, smoking regulations.

## **5. Rubbish And Waste Materials**

- 5.1.** Rubbish and waste materials are to be kept to a minimum.  
**5.2.** The burning of rubbish is prohibited.

## **6. Flammable And Combustible Liquids**

- 6.1.** The handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.
- 6.2.** Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes, requires the permission of the Fire Chief.
- 6.3.** Transfer of flammable and combustible liquids is prohibited within buildings or jetties.
- 6.4.** Transfer of flammable and combustible liquids will not be carried out in the vicinity of open flames or any type of heat-producing devices.
- 6.5.** Flammable liquids having a flash point below 38°C such as naphtha or gasoline will not be used as solvents or cleaning agents.
- 6.6.** Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.

## **7. Hazardous Substances**

- 7.1.** Work entailing the use of toxic or hazardous materials, chemicals and/or explosives, otherwise creates a hazard to life, safety or health, will be in accordance with the National Fire Code of Canada.
- 7.2.** Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation will be assured and all sources of ignition are to be eliminated. The Fire Chief is to be informed prior to and at the cessation of such work.

**8. Questions and/or Clarification**

- 8.1.** Direct any questions or clarification on Fire Safety in addition to above requirements to Fire Chief.

**9. Fire Inspection**

- 9.1.** Site inspections by Fire Chief will be coordinated through HRCE Project Manager.
- 9.2.** Allow Fire Chief unrestricted access to the work site.
- 9.3.** Co-operate with the Fire Chief during routine fire safety inspection of the Work site.
- 9.4.** Immediately remedy all unsafe fire situations observed by the Fire Chief.

**10. Reference Standards**

- 10.1.** Where edition date is not specified, consider that references to manufacturer's and, published codes, standards and specifications are made to the latest edition, (revision) approved by the issuing organization, current at the date of this Specification.
- 10.2.** Reference standards and specifications are quoted in this Specification to establish minimum standards. Work which in quality exceeds these minimum standards shall be considered to conform.
- 10.3.** Should the Contract Documents conflict with specified reference standards or specifications the General Conditions of the Contract shall govern.
- 10.4.** Where reference is made to manufacturer's directions, instructions or specifications they shall include full information on storing, handling, preparing, mixing, installing, erecting, applying, or other matters concerning the materials pertinent to their use and their relationship to materials with which they are incorporated.
- 10.5.** Have a copy of each code, standard and specification, and manufacturer's directions, instructions and specifications, to which reference is made in this Specification, always available at construction site.
- 10.6.** Standards, specifications, associations, and regulatory bodies are generally referred to throughout the specifications by their abbreviated designations:

AA	The Aluminum Association
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ARI	Air Conditioning & Refrigeration Institute
ASTM	American Society for Testing & Materials
CCA	Canadian Construction Association
CGSB	Canadian General Standards Board
CSA	Canadian Standards Association
NSDTIR	Department of Transportation & Infrastructure Renewal, Province of Nova Scotia
IAO	Insurers Advisory Organization
NBC	National Building Code
NFPA	National Fire Protection Association
CANS	Construction Association of Nova Scotia
ULC	Underwriters Laboratories of Canada
WHMIS	Workplace Hazardous Materials Information System

**END OF SECTION 01 41 00**

## SECTION 01 45 00 - QUALITY CONTROL

### 1. Section Includes

- 1.1. Inspection and testing, administrative and enforcement requirements
- 1.2. Tests and mix designs.
- 1.3. Mock-ups.
- 1.4. Mill tests.
- 1.5. Equipment and system adjust and balance.
- 1.6. Verification by affidavits and certificates that specified products meet requirements of reference standards: In applicable Sections of the Specification.
- 1.7. Testing, balancing and adjusting of equipment: In applicable Mechanical and Electrical Sections of the Specification.
- 1.8. Cutting & Patching: Section 01 11 41.

### 2. Related Sections

- 2.1. Section 01 33 00 Submittal Procedures: Submission of samples to confirm product quality.
- 2.2. Section 01 61 00 Material & Equipment: Material and workmanship quality – reference standards.
- 2.3. Section 01 77 00 Contract Closeout.

### 3. REVIEW OF WORK

- 3.1. The Owner shall have access to the Work. If part of the Work is in preparation at locations other than the Place of the Work, access shall be given to such work whenever it is in progress.
- 3.2. Give timely notice to the Owner's Representative, requesting review of the Work as indicated in the Contract Documents.
- 3.3. If the Contractor covers or permits to be covered Work that has been designated for review by the Owner before such is made, uncover such Work, have the review satisfactorily completed and make good such Work at no extra cost to Owner.

### 4. Inspection, Special Tests, Approvals

- 4.1. Engage the services of appropriate inspection testing agencies ensuring the Work meets codes, acts and regulations, and laws in force at the place of Work. Include such costs in the Contract Price.

- 4.2. Give timely notice requesting inspection to those required to provide inspections, special tests, or approvals, where Work is designated, by the Owner's instructions or the law of the place of Work, for special tests.
- 4.3. If the Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have the inspections or tests satisfactorily completed and make good such Work at no extra cost to the Owner.
- 4.4. The Owner may order any part of the Work to be examined if the Work is suspected to be not in accordance with the Contract Documents. If, upon examination such Work is found not in accordance with the Contract Documents, correct such Work and pay the cost of examination and correction. If such Work is found in accordance with the Contractor Documents, the Owner shall pay the cost of examination and replacement.

## **5. Independent Inspection Agencies**

- 5.1. Independent Inspection/Testing Agencies may be engaged by the Owner for the purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by the Owner.
- 5.2. Provide access to the Work, and equipment required for executing inspection and testing by the appointed agencies.
- 5.3. Employment of inspection/testing agencies does not relax the Contractor's responsibility to perform Work, or carry out his own inspections and testing in accordance with the Contract Documents.
- 5.4. If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Owner at no cost to the Owner. Pay costs for retesting and reinspection.

## **6. Access To Work**

- 6.1. Allow inspection/testing agencies access to the Work, off site manufacturing and fabrication plants.
- 6.2. Co-operate to provide reasonable facilities for such access.

**7. Procedures**

- 7.1. Notify the appropriate agency and Owner in advance of the requirement for tests, in order that attendance arrangements can be made.
- 7.2. Submit samples and/or materials required for testing, at specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the Work.
- 7.3. Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

**8. Rejected Work**

- 8.1. Remove defective Work, whether the result of poor workmanship, use of defective products or damage and whether incorporated in the Work or not, which has been rejected, including (but not limited to) defective Work rejected by the Owner as failing to conform to the Contract Documents. Replace or re-execute in accordance with the Contract Documents.
- 8.2. Make good other Contractor's work damaged by such removals or replacements promptly.
- 8.3. If in the opinion of the Owner, it is not expedient to correct defective Work or Work not performed in accordance with the Contract Documents, the Owner may deduct from the Contract Price the difference in value between the Work performed and that called for by the Contract Documents, the amount of which shall be determined by the Owner.

**9. Reports**

- 9.1. Submit four (4) copies of inspection and test reports to the Owner.
- 9.2. Provide copies to Contractor's Consultant and Subcontractor of Work being inspected or tested.

**10. Tests and Mix Designs**

- 10.1. Furnish test results and mix designs as may be requested.
- 10.2. The cost of tests and mix designs beyond those called for in the Contract Documents or beyond those required by law of the Place of Work shall be appraised by the Owner and may be authorized as recoverable.



**11. Mock-Up**

- 11.1.** Prepare mock-up for Work for each finish in the Work and other work specifically requested in the specifications. Include for Work of all Sections required to provide mock-ups.
- 11.2.** Construct in all locations as specified in specific Section.
- 11.3.** Prepare mock-up for Owner's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in the Work.
- 11.4.** Failure to prepare mock-up in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- 11.5.** If requested the Owner will assist in preparing a schedule fixing the dates for preparation.
- 11.6.** Mock-ups may remain as part of the Work, unless specified otherwise in the Contract Documents.

**12. Mill Tests**

- 12.1.** Submit mill test certificates as may be requested.

**13. Equipment And Systems**

- 13.1.** Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.
- 13.2.** Refer to Contract Documents for definitive requirements.

**END OF SECTION 01 45 00**

## SECTION 01 52 00 – CONSTRUCTION & TEMPORARY FACILITIES

### 1. General

- 1.1. Include in the Work construction and temporary facilities required as construction aids or by jurisdictional authorities or as otherwise specified. Install to meet needs of construction as Work progresses. Maintain construction and temporary facilities during use, relocate them as required by the Work, remove them at completion of need and make good adjacent Work and property affected by their installation.
- 1.2. Include in the Work construction and temporary facilities to provide for construction safety such as: fences, barricades, bracing, supports, storage, sanitation and first aid facilities, fire protection, stand pipes, electrical supply, construction equipment with its supports and guards, stairs, ramps, platforms, runways, ladders, scaffolds, guardrails, temporary flooring, rubbish chutes, and walkway, morality and guard lights, and as otherwise required of the Constructor by the Construction Safety Act, of the Province of Nova Scotia, as well as all other applicable regulations or jurisdictional authorities.
- 1.3. Construct temporary Work of new materials unless use of second-hand materials is approved.
- 1.4. Ensure that structural, mechanical, and electrical characteristics of temporary facilities are suitable and adequate for use intended. Be responsible that no harm is caused to persons and property by failure of temporary facilities because of placing, location, stability, protection, structural sufficiency, removal, or any other cause.
- 1.5. Locate temporary facilities as directed and coordinated with School Administration and HRCE.
- 1.6. Relocate construction and temporary facilities as required by the Progress of the Work, and remove at completion of Work.
- 1.7. Do not permit construction personnel to use new washroom and toilet facilities.
- 1.8. Interior work zones to be complete with temporary negative air ventilation units to be functioning at all times to control dust migration to occupied areas.
- 1.9. Refer also to HRCE Policies & Guidelines contained in Appendix A of Section 01 35 13.

### 2. Services

- 2.1. Temporary Electric Power:
  - 2.1.1. The Contractor will provide a source of electric power for all construction purposes.
  - 2.1.2. Coordinate with the Building Operator locations of power sources and arrange to connect under his direction.
  - 2.1.3. Install electric service distribution conductors and necessary components. Determine anticipated demand which will be placed on service during normal peak periods and obtain approval on this basis before making installation. Supply power of characteristics required by the Work. Install a power centre for miscellaneous tools

and equipment for each major building floor area with distribution box, a minimum of four 20 amp grounded outlets, and circuit breaker protection for each outlet. Make connections available to any part of the Work within distance of a 100'-0" extension.

2.2. Temporary Lighting:

2.2.1. Install lighting for

2.2.1.1. emergency evacuation, safety and security throughout the Project at intensity levels required by jurisdictional authorities.

2.2.1.2. performance of Work throughout Work areas as required, evenly distributed, and at intensities to ensure that proper installations and applications are achieved.

2.2.1.3. performance of finishing Work in areas as required, evenly distributed and of an intensity of at least 15 foot candles.

2.2.2. Permanent fluorescent lighting may be used during construction, provided that fixtures, lamps and lenses are completely cleaned. Incandescent sources may be used during construction to the extent of 20% of the total. Electrical Division Contractor to provide 20% spare lamps to the Owner for replacement purposes.

2.3. Temporary Sanitary Facilities:

2.3.1. Provide sanitary facilities for persons on the Work site. Facilities in areas of the building are only to be used under extraordinary circumstances and with prior approval.

2.4. Maintain fire protection as required by jurisdictional authorities. The Contractor is responsible for de-activating and re-activating Fire Alarm zones as required by the Work of the Contract and to maintain protection in the existing building.

**3. Construction Aids**

3.1. Hoists & Cranes:

3.1.1. Select, operate and maintain hoisting equipment and cranes as may be required. Operate such equipment only by qualified hoist or crane operators. Make hoist available for Work of each Section.

3.2. Building Enclosure:

3.2.1. Include in Work temporary enclosure for building as required to protect it, in its entirety or in its parts, against the elements, to maintain environmental conditions

required for Work. Design enclosures to withstand wind pressures required for the building by jurisdictional authorities. Erect enclosures to allow complete accessibility for installation of materials during the time enclosures remain in place.

3.3. Scaffolding:

- 3.3.1. Each user of scaffolding shall be responsible for its examination and testing for sufficiency before using it. He shall make it secure if necessary, or shall notify the Contractor in writing that he will not commence work until it is made secure; otherwise he will be held responsible for accidents due to its insufficiency.

**4. Barriers**

- 4.1. Install barricades for traffic control, and to prevent damaging traffic over exterior and interior finished areas, as well as safety barricades and otherwise, as may be required.
- 4.2. Construct hoardings and walkways as required by HRCE or jurisdictional authorities.

**5. Protection**

- 5.1. Protect roofs and podiums by substantial temporary construction to ensure that no damage occurs. Provide protection by materials of sufficient thickness to prevent all damage to structure and finish, and to waterproofing qualities of membranes, whenever each of these individual components are exposed. Damage shall include harm resulting from all construction work, such as falling objects, wheel and foot traffic, failure to remove debris, operation of machinery and equipment, and scaffolding and hoisting operations. Positively secure protection to prevent displacement from any cause.
- 5.2. Box with wood or otherwise protect from damage, by continuing construction, finished sills, jambs, corners, and the like.

**END OF SECTION 01 52 00**

## SECTION 01 61 00 - MATERIAL & EQUIPMENT

### 1. General

- 1.1. Products refer to materials, manufactured components and assemblies, fixtures and equipment incorporated in the Work.
- 1.2. Use only products of Canadian manufacture unless such products are not manufactured in Canada, are specified otherwise, or are not competitive.
- 1.3. Products for use in the Project and on which the Tender was based shall be in production at that time, with a precise model and shop drawings available for viewing.
- 1.4. Where equivalent products are specified, or where alternatives are proposed under "substitution of products", these products claimed by the Contractor as equivalent shall be comparable in construction, type, function, quality, performance, and, where applicable, in appearance, as approved. Where specified equivalents are used in the tendered bulk sum price for the Work, they shall be subject to final approval.
- 1.5. Incorporate products in the Work in strict accordance with manufacturers' directions unless specified otherwise.
- 1.6. Products delivered to the Project site for incorporation in the Work shall be considered the property of the Owner. Maintain protection and security of products stored on the site after payment has been made for them.
- 1.7. Do not install permanently incorporated labels, trademarks and nameplates, in visible locations unless required for operating instructions or by jurisdictional authorities.

### 2. Specified Products

- 2.1. Products specified by manufacturer's name, brand name or catalogue reference shall be the basis of the bid and shall be supplied for the Work without exception in any detail, subject to allowable substitutions as specified.
- 2.2. Where several proprietary products are specified, any one of the several will be acceptable.
- 2.3. For products specified by reference standards, the onus shall be on the supplier to establish that such products meet reference standard requirements. The Architect may require affidavits from the supplier, as specified in Section 01 33 00, or inspection and testing at the expense of the supplier, or both, to prove compliance. Products exceeding minimum requirements established by reference standards will be accepted for the Work if such products are compatible with and harmless to Work with which they are incorporated.

### **3. Substitution Of Products During Progress Of Work**

- 3.1.** Products substituted for those specified or approved, or both, shall be permitted only if the listed product cannot be delivered to maintain construction schedule and if the delay is caused by conditions beyond the Contractor's control.
- 3.2.** Obtain approval for substitutions. Application for approval of substitutions shall be made only by Contractor. Process proposals for substituted Work in accordance with procedures established for changes in the Work.
- 3.3.** Submit, with request for substitution, documentary evidence that substituted products are equal to, or superior to, approved products, and a comparison of price and delivery factors for both specified or approved products, and proposed substitute.
- 3.4.** Ensure that substituted products can be both physically and dimensionally incorporated in the Work with no loss of intended function, performance, space or construction time, and that spare parts and service are readily available. The Contractor shall be responsible for additional installation costs, including architectural and engineering fees, required by incorporation of substituted products, and for adaptations made otherwise necessary to ensure that above requirements are satisfied.

### **4. Product Handling**

- 4.1.** Manufacture, pack, ship, deliver and store products so that no damage occurs to structural qualities and finish appearance, nor in any other way detrimental to their function or appearance, or both.
- 4.2.** Ensure that products, while transported, stored or installed, are not exposed to an environment which would increase their moisture content beyond the maximum specified.
- 4.3.** Schedule early delivery of products to enable Work to be executed without delay. Before delivery, arrange for receiving at site.
- 4.4.** Deliver package products, and store until use, in original unopened wrapping or containers, with manufacturer's seals and labels intact.
- 4.5.** Label packaged products to describe contents, quantity and other information as specified.
- 4.6.** Product handling requirements may be repeated and additional requirements specified, in other Sections.

**5. Storage & Protection**

- 5.1. Coordinate material delivery to ensure that areas within or on building are available to receive them.
- 5.2. Store manufactured products in accordance with manufacturer's instructions, when such instructions are attached to products or submitted by him.
- 5.3. Store finished products and woodwork under cover at all times.
- 5.4. Store and handle flammable liquids and other hazardous materials in approved safety containers and as otherwise prescribed by safety authorities. Store no flammable liquids or other hazardous materials in bulk within the Project.
- 5.5. Storage and special protection requirements may be repeated, and additional requirements specified, in other Sections.

**6. Defective Products & Work**

- 6.1. Products and Work found defective; not in accordance with the Specifications; or defaced or injured through negligence of the Contractor, his employees or subcontractors, or by fire, weather or any other cause will be rejected for incorporation in the Work.
- 6.2. Remove rejected products and Work from the premises immediately.
- 6.3. Replace rejected products and Work with no delay after rejection. Provide replacement products and execute replacement Work precisely as required by the Specification for the defective Work replaced. Previous inspection and payment shall not relieve the Contractor from the obligation of providing sound and satisfactory Work in compliance with this Project Manual.

**7. Workers, Suppliers & Subcontractors**

- 7.1. Assign Work only to workers, suppliers, and Subcontractors who have complete knowledge, not only of the conditions of this Project Manual, but of jurisdictional requirements, and reference standards and specifications.
- 7.2. Give preference to use of local workers, suppliers, and Subcontractors wherever possible.

**8. Workmanship**

- 8.1. Unless otherwise specified in a more detailed manner, workmanship shall be of the highest quality recognized by trade executing the Work in accordance with standard practices, by the best methods recommended by the manufacturer of the Product, and as approved by the Architect.

**END OF SECTION 01 61 00**

## SECTION 01 77 00 – CONTRACT CLOSEOUT

### 1. Section Includes

- 1.1. Final cleaning.
- 1.2. Spare parts and maintenance materials.
- 1.3. Take over procedures.

### 2. Related Sections

- 2.1. Individual Specifications Sections: Specific requirements for operation and maintenance data.

### 3. Final Cleaning

- 3.1. Refer to the General Conditions of Contract.
- 3.2. Before final inspection, replace glass and mirrors broken, damaged and etched during construction, or which are otherwise defective.
- 3.3. In addition to requirements for cleaning-up specified in General Conditions of the Contract, include in Work final cleaning by skilled cleaning specialists on completion of construction.
- 3.4. Remove temporary protections and make good defects before commencement of final cleaning.
- 3.5. Remove waste products and debris other than that caused by the Owner, other contractors or their employees, and leave the Work clean and suitable for occupancy by Owner.
- 3.6. Remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the Owner or other Contractors.
- 3.7. Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- 3.8. Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors and ceilings.
- 3.9. Vacuum clean and dust building interiors, behind grilles, louvres and screens as affected by Work.
- 3.10. Wax, seal, shampoo, buff or prepare floor finishes, as recommended by the manufacturer. Use products compatible with products used by building maintenance staff.
- 3.11. Broom clean and wash all horizontal and vertical surfaces as affected by Work.
- 3.12. Clean up and make good exterior grades, lawns, planting and surfaces after removal of temporary access and facilities.
- 3.13. Removing of visible labels left on materials, components, and equipment.
- 3.14. Maintain cleaning until Owner has taken possession of building or portions thereof.



**4. Spare Parts And Maintenance Materials**

- 4.1. Spare parts and maintenance materials provided shall be new, not damaged or defective, and of the same quality and manufacture as Products provided in the Work. If requested, furnish evidence as to type, source and quality of Products provided.
- 4.2. Defective Products will be rejected, regardless of previous inspections. Replace products at own expense.
- 4.3. Store spare parts and maintenance materials in a manner to prevent damage, or deterioration.
- 4.4. Provide spare parts, special tools, maintenance and extra materials in quantities specified in individual specification Sections.
- 4.5. Provide items of same manufacture and quality as items in the Work.

**5. Demonstration Of Systems & Equipment**

- 5.1. Give a complete demonstration of all systems and equipment in the presence of the Consultant at the following times:
- 5.2. When each is 100% completed at the request of the Contractor.
- 5.3. At time of inspection to validate final completion.
- 5.4. At final completion for the benefit of the maintenance staff for the Project.
- 5.5. Responsible personnel representing the Subcontractor responsible for the Work being demonstrated shall be present at each demonstration.

**6. Submittals**

- 6.1. Submit with application for substantial performance certificate.
  - 6.1.1. Certificate of Substantial Performance inspection report from electrical utility or inspection.
  - 6.1.2. Certificate of verification of fire alarm system.
  - 6.1.3. Certificate from the Fire Marshal's Office and I.A.O. of final inspection of sprinkler system.
  - 6.1.4. Air balance reports.
  - 6.1.5. Other reports required or specified.
  - 6.1.6. Maintenance Manuals and Operating Instructions.
- 6.2. Submit with application for release of final payment:
  - 6.2.1. Final project record drawings.
  - 6.2.2. Extra stock.
  - 6.2.3. Performance bonds which shall remain in effect for one (1) year after take-over date.
  - 6.2.4. Completed Liability Insurance Policy extended for one (1) year from take-over date.
  - 6.2.5. Written guarantee covering all workmanship and materials used in the Work.
  - 6.2.6. Maintenance bonds as specified.

- 6.2.7. Extended Warranties as specified
- 6.2.8. Certificate from Workers' Compensation Board.
- 6.2.9. Certificate from Health Services Tax Division.

## 7. Final Inspection Procedures

- 7.1. Schedule, make arrangements for and administer final inspections and close out in the following stages.
- 7.2. Contractor's Inspection:
  - 7.2.1. Determination that Project meets requirements for substantial performance and inspection is the responsibility of the Contractor.
  - 7.2.2. The Contractor and all Subcontractors shall conduct an inspection of the work, identify deficiencies and defects; repair as required. Notify the Consultant in writing of satisfactory completion of the contractor's Inspection and that corrections have been made. Request a Consultant's Substantial Performance Inspection.
- 7.3. Consultant's Inspection: Consultants and the Contractor will perform an inspection of the Work to identify obvious defects or deficiencies. The contractor shall correct Work accordingly.
- 7.4. Substantial Performance Inspection:
  - 7.4.1. When the items noted above are complete, request a substantial performance inspection of the Work by the Consultant, and the Contractor. If Work is deemed incomplete by the Consultant, complete the outstanding items and request a re-inspection.
  - 7.4.2. Substantial performance inspections shall be scheduled to begin within eight working days of the Contractor's request.
  - 7.4.3. Present at the substantial performance inspection will be:
    - 7.4.3.1. The Consultant and his Sub-consultants that he requires and notifies.
    - 7.4.3.2. The Owner's representatives, upon notification by the Consultant.
    - 7.4.3.3. The Contractor and such Subcontractors that he considers are required.
    - 7.4.3.4. The Contractor will compile a substantial performance deficiency list at this inspection and issue it to the Consultant and Owner.
    - 7.4.3.5. The Contractor shall correct substantial performance deficiencies before a date agreed upon by the Contractor and Consultant.
    - 7.4.3.6. Upon the Consultant's approval of substantial performance, the Contractor shall submit an application for a substantial performance certificate.
    - 7.4.3.7. When the Contractor has satisfied himself that these corrections have been completed in a satisfactory manner by his inspection he shall schedule a final Contractor's inspection by the Consultant, and the Owner's representatives if required, within five working days of the Contractor's request.

**7.4.3.8.** Upon the Consultant's approval of completion, the Contractor shall submit an application for a completion certificate.

**8. Substantial Performance**

- 8.1.** The Consultant will issue a Certificate of Substantial Performance when satisfied outstanding deficiencies noted during inspections prior to the Substantial Performance inspection have been corrected, the Work is substantially complete and is so certified by the Owner.
- 8.2.** A list of remaining deficiencies to be rectified before final acceptance will be attached to the Certificate of Substantial Performance.
- 8.3.** Make submissions specified in Subparagraph 1.06 of this Section.

**9. Certificate For Release Of Amount Due At Substantial performance**

- 9.1.** The Consultant will issue to the Owner a certificate for release of money in an amount equal to the amount due the Contractor under the Contract Documents provided the Consultant is satisfied the Work has been substantially completed.
- 9.2.** The certificate shall indicate the date of substantial performance.
- 9.3.** Payment shall be due in accordance with GC 5.4 and the Contract Documents.

**10. Completion Certificate**

- 10.1.** The Consultant will issue a Certificate of Completion (DSS Document DC670-92) when he is satisfied that outstanding deficiencies noted during inspections have been corrected and the Work is completed and is so certified by the Owner.
- 10.2.** The date of the completion certificate will commence the required sixty (60) day period before release of final payment.

**11. Certificate For Release Of Final Payment**

- 11.1.** Subject to the provisions of the Contract Documents, the Consultant will issue to the Owner a certificate for release of final payment sixty (60) days after date of completion certificate providing he is satisfied the Work has been completed.
- 11.2.** The certificate will be in an amount equal to the remaining money due the Contractor under the Contract, and shall indicate the date of final completion.
- 11.3.** Payment shall be due upon date of final completion.

## **12. Warranties**

### **12.1. Establishment of Warranties:**

**12.1.1.** Warranties shall commence on the Ready-for-Takeover date.

### **12.2. Warranty Period:**

**12.2.1.** The Owner will advise the Consultant of defects observed during warranty periods.

**12.2.2.** The Consultant will notify the Contractor of defects observed during warranty period and request him to remedy the defects in accordance with the Contractor documents.

**12.2.3.** Thirty (30) days before expiration of warranties the Owner's representatives, the Consultant and the Contractor will inspect the Work as arranged by the Contractor noting defects of products and workmanship.

**12.2.4.** The Contractor shall immediately remedy such noted defects.

**END OF SECTION 01 77 00**

## CONTRACTOR'S CHECKLIST

### Pre-Closing Reminder to Proponents:

- This Request for Proposals (RFP) is a **two-file process**.  
Please ensure that the submission instructions are followed carefully as noted in Section 00 21 13 – Information to Proponents to ensure your submission is compliant.
- Required Bid Security – (10% of the Contract price before HST)
- Please include a copy of your bid security in with your Price Submission file.
- Please submit your proposal to the submission email address: [hrcetenders@hrce.ca](mailto:hrcetenders@hrce.ca)
- The HRCE will use the CCDC-2, 2020 for this work. A copy of the Standard Construction Contract CCDC 2 – 2020 is available upon request and will form part of the contract documents.
- The HRCE Supplementary General Conditions for the CCDC-2, 2020 applicable for this work is available for review under Section 0073 00 of the RFP document.

### Post Award Document Requirements:

- Certificate of Recognition from a safety audit organization, jointly signed with the WCB.
- Workers' Compensation Board Letter of Good Standing.
- Certificate of Good Standing from the Canadian Roofing Contractors Association and Roofing Contractors Association of Nova Scotia.
- Contract Security documentation – if required
- Insurance Certificate – As identified in the RFP.
- Schedule of Values
- Site Specific Safety Plan
- Hazard Assessment
- Listing of subcontractors
- Warranty information

The award letter will list the specific documents required and provide a submission timeframe.

A purchase order will be issued only after receipt of all required items.

**Work is not authorized until purchase order is issued.**

**PROJECT EXPERIENCE AND REFERENCES FORM**

Refer Technical Submission Requirements in Section 11.3.1 Section I.

**Project #1 – The most recent HRCE project, if applicable.**

<b>Company Name</b>	
<b>Brief Project Description</b>	
<b>Project Manager Name</b>	
<b>Project Dollar Value \$</b>	
<b>Reference Name</b>  <b>and Position Title</b>	
<b>Reference Contact Info</b>  - Email Address  - Phone Number	

## PROJECT EXPERIENCE AND REFERENCES FORM

Refer Technical Submission Requirements in Section 11.3.1 Section I.

### Project #2 – The next most recent HRCE project, if applicable

<b>Company Name</b>	
<b>Brief Project Description</b>	
<b>Project Manager Name</b>	
<b>Project Dollar Value \$</b>	
<b>Reference Name and Position Title</b>	
<b>Reference Contact Info</b>  - Email Address  - Phone Number	

## PROJECT EXPERIENCE AND REFERENCES FORM

Refer Technical Submission Requirements in Section 11.3.1 Section I.

### Project #3 – Any recent project

<b>Company Name</b>	
<b>Brief Project Description</b>	
<b>Project Manager Name</b>	
<b>Project Dollar Value \$</b>	
<b>Reference Name</b>  <b>and Position Title</b>	
<b>Reference Contact Info</b>  - Email Address  - Phone Number	



## PROJECT SAFETY PLAN OUTLINE

During the planning of each project, environmental and occupational health and safety issues will be assessed like any other key project component.

Prior to beginning a new project, tendering contractors shall examine the work area to identify potentially hazardous site specific situations.

Once identified, these hazards should be prioritized on this Hazard Assessments/Project Safety Plan Outline and corrective *actions* noted to eliminate or control each hazard. The dates of when and names of the persons who are responsible for completing the *action* should also be assigned.

Copies of the completed Safety Plan Outline shall be submitted post award, sent to the HRCE Operations Services Regional Manager, made available on the job site and communicated to the workers.

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Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Project Start date: \_\_\_\_\_

Project End date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Completed by: \_\_\_\_\_

(Contractor's project manager)

Date: \_\_\_\_\_

Copy to: \_\_\_\_\_

**PLANNING:**

Does the Contractor’s Occupational Health and Safety Program deal with the work activities associated with this project?     Yes     No

Describe tasks to be undertaken: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**HAZARDS ASSESSMENT:**

Identify the hazards that could present themselves on this project (e.g. live electrical wires, over water, confined space, etc) and describe what steps will be taken to prevent an incident (e.g. cover up, de-energize, safe work practices, netting, etc). Prioritize from #1 as needing immediate action.

#	Hazard	Required Action	Completed by	Date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

**ENVIRONMENTAL ASSESSMENT:**

Identify the environmental issues that could present themselves on this project (e.g. oil spills, asbestos, etc.) and describe the action that will be taken to eliminate or reduce the risk of occurrence (e.g. mop kits, air sampling, etc.)

#	Hazard	Required Action	Completed by	Date
1				
2				
3				
4				
5				

**EMERGENCY RESPONSE:**

In the event of an incident, pre-plan the response and write up the procedures. Minimally, the following list should be completed and posted on site:

Contact	Phone #	Contact	Phone#
Fire	911	Poison Control	902-428-8161
Ambulance	911	Dangerous Goods	1-800-565-1633
Doctor	911	Waste Disposal	
Police	911	Insurance	
HRCE Office	902-493-5110	Min./Dept of Labour	1-800-952-2687
Min./Dept of Transport		Min./Dept of Enviro	1-800-565-1633

- Identify and arrange source of first aid, ambulance and rescue.
- Accidents will be reported to: \_\_\_\_\_
- Accidents will be investigated by: \_\_\_\_\_
- Back-up call to: \_\_\_\_\_
- HRCE # emergency/after hours: day 902-493-5110 after 4:00 pm 902-442-2476

**SAFETY MEETINGS:**

On this project, given the nature of the work and the anticipated size of the work force, the following frequency will apply:

Site meetings \_\_\_\_\_

Site Audits \_\_\_\_\_

Follow up with HRCE Manager: \_\_\_\_\_

**SITE IMPLEMENTATION:**

- Health and Safety Rep & Safety Committee:  
Establish liaison between HRCE, contractor, site administration First Aid, PPE, other safety items as required.
  
- Documentation:  
Applicable MSDS Safety program  
Applicable work procedures Permits  
First Aid Certification

**TRAINING:**

The following training/testing will be mandatory on site:

1) \_\_\_\_\_  
\_\_\_\_\_

2) \_\_\_\_\_  
\_\_\_\_\_

3) \_\_\_\_\_  
\_\_\_\_\_

## PART 1 - GENERAL

### 1.1 SCOPE OF WORK: LOW SLOPE – ROOF REPLACEMENT

- .1 On Roof Area 1.1, 2.1 and 2.2: Remove existing perimeter flashings, old appurtenances, and existing four (4) ply built-up roof system down to existing metal deck in preparation for installation of a new 2-ply modified bitumen cap sheet membrane in accordance with Section 07 52 16. All Roof materials to be attached to CSA A123. 21-14 wind uplift standards.
  - .1 Contractor to review the underside of the existing deck with Consultant and Owner during site meeting to determine the amount of interior tarping required for this work. See Unit Pricing. All areas requiring tarping to be completing prior to tear off, see paragraph 1.11.
  - .2 Review exposed metal deck for damage/deterioration. For areas with minor corrosion apply rust inhibiting primer. For areas with severe corrosion replace deck sections as required. Review work with consultant prior to remediating
  - .3 Install new 0.5" gypsum deck board, adhered in roofing adhesives.
  - .4 Install new self-adhered modified bitumen vapour barrier, field membrane and flashings.
    - .1 Ensure deck board is fully primed prior to vapour barrier installation.
  - .5 Install new base layer of 2.0" polyisocyanurate insulation, in roofing adhesive.
  - .6 Install new overlay layer of 3.0" polyisocyanurate insulation, in roofing adhesive.
  - .7 Install new 0.5" gypsum cover board, 7mm 2-1 Asphaltic coverboard with laminated base sheet or 14.9mm 2-1 HD ISO coverboard laminated with base sheet, in roofing adhesive.
  - .8 Install new 1 ply modified bitumen base sheet board and flashings, and field membrane if required for gypsum, self-adhered.
  - .9 Install new 1 ply modified bitumen cap sheet field membrane and flashings, torch applied.
  - .10 Install new pre-finished sheet metal flashings and trim with required hook strips.

### 1.2 SCOPE OF WORK: WALL REHABILITATION, NEW DOOR, AND NEW LADDER

***Submit shop drawings for all materials and accessories used for wall, ladder, and door work including associated trims, accessories, and assembly methods.***

1. Siding Rehabilitation Scope: On North Wall Adjacent to Roof Area 1.1 remove existing metal cladding and replace with new metal siding assembly to section 07 46 19, 07 62, 00, and 07 92 00. Supply all tools, materials, and labour required to carry out the scope of work.
  - .1 Remove section of existing metal siding, as outlined on drawings, including z-bars, accessories, and trim down to expose existing wall membrane. Review existing wall membrane and repair as required prior to installing new siding.
  - .2 Install new z-girts as recommended by manufacturer.
    - .1 Ensure new Z girts are the appropriate size so that the finished surface of the cladding aligns and is flush with the finished surface of remaining brick wall.
  - .3 Install new corrugated vertical metal siding, hidden fastener system. New system to match or be as close to the color, style, profile as the existing surrounding metal siding.

- .4 Install new prefinished metal trim (color matched) and sealants as required.
- 1. New Door Scope: Remove the existing second window from the right side of the wall as shown on drawings. Verify window removal with Consultant and Owner on site. Install new metal door to section 08 11 00, 08 71 00, and 07 92 00. Supply all tools, materials, and labour required to carry out the scope of work.
  - .1 Remove existing window assembly and all associated trims, flashings, and accessories down to the original rough opening of exterior framing and dispose of to an appropriate site.
    - .1 Remove and dispose of existing interior trim and jamb/sill extensions.
    - .2 Widen and lengthen the existing opening as required to suit new door install including install of new framing to suit existing wall assembly.
    - .3 Clean and prepare rough openings as required.
    - .4 Inspect all existing conditions and repair damaged materials as required.
    - .5 Install new self adhered membrane on all sides of rough opening.
    - .6 Ensure all membranes and flashings are positively lapped to shed water away from the wall.
    - .7 Install one (1) new metal doors as per specifications, drawings, and according to manufacturer's printed recommendations.
    - .8 Spray foam within/around all frames.
    - .9 Door to be supplied with required hardware.
      - .1 Submit shop drawings for new windows and doors including associated trims, accessories, and assembly methods.
    - .10 Provide and install all required trims and flashings. Install compressible gasket between all dissimilar metals.
    - .11 Provide the interior side of the windows with new painted solid wood to match existing jamb/sill extensions and perimeter trim.
    - .12 Install sealant as required.
  - .2 New Access Ladder: Supply and install new metal wall-mounted, fixed roof access ladder where indicated on roof plan between Roof Areas 1.1 and 2.1. Exact location to be determined on site with Consultant.
    - .1 Adjust ladder requirements as required to suit existing conditions, including height of related parapets and perimeters. Mounting and anchoring of new ladder to be appropriate for existing wall type and construction.
    - .2 Fixed Ladder Height: Include in design for height and configuration of adjacent roof perimeter or parapet.
    - .3 Ladders to incorporate use of horizontal treads instead of round rungs. Fixed aluminum ladders to incorporate use of aluminum treads.
      - .1 Treads to be a maximum of 57mm (2.25") in width and have anti-slip surfacing.
      - .2 Handrails to extend above and over perimeter parapet detail.

- .3 Ladder to be engineered and supplied by:
  - .1 Parzee & Associates, Phone 905.629.9898,
  - .2 The Skyline Group, Toll Free 877.417.6336,
  - .3 or Rimkus Consulting Group approved equivalent.
- .4 Provide engineered shop drawings to Consultant for review prior to fabrication and installation.
  - .1 Shop drawings to be specific to this project and include all attachment requirements and securement details for installation to existing construction and wall type.
- .5 Protect roof membrane with provision of two (2) 610x610x57mm (24"x24"x2.25") concrete Pedslab pavers by Brooklin Concrete, set on top of 585x585x25mm (23"x23"x1") extruded polystyrene insulation pads at both top and bottom of each ladder installation.

### 1.3 SCOPE OF WORK: INTERIOR PROTECTION (UNIT PRICING)

- .1 Interior Protection (Roof Area 1.1, 2.1, and 2.2): Provide new temporary, under-deck, interior dust protection during performance of Work at sections related to corresponding roof replacement work above.
  - .1 Install new, clean, clear plastic tarpaulins with plastic zip-ties and tape as required at designated protection areas under exposed roof decking.
    - .1 Install tarps safely around lights and sprinkler heads without obstructing or interfering with their normal operation.
    - .2 Check performance of under-deck protection periodically during performance of roof work to ensure its adequacy and function.
  - .2 Carefully remove temporary protection at conclusion of work, dispose of any accumulated debris, and avoid dust contamination to interior during tarp removal.
    - .1 Contractor to be responsible for interior cleaning at no additional cost to Owner, where dust protection work found to be inadequate and resulting in unacceptable levels of dust.
  - .3 All setup and removal work to be done without disruption to building operations and occupants. Coordinate scheduling of protection work with Owner's on-site representatives to minimize impact on facility's normal operations.

### 1.4 CLEANING

- .1 Perform daily and final clean-up of work area and areas surrounding site.

### PART 2 - PRODUCTS (NOT USED)

### PART 3 - EXECUTION (NOT USED)

END OF SECTION - 01 11 00

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## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 01 11 00 – Summary of Work
- .2 Section 07 52 16 – SBS Modified Bituminous Membrane Roofing

### **1.2 REFERENCES**

- .1 Latest edition of all listed references to apply:
  - .1 Canadian Standards Association CSA S350, Code of Practice for Safety in Demolition of Structures.
  - .2 National Building Code of Canada, Part 8, “Safety Measures at Construction and Demolition Sites”, and Provincial requirements.
  - .3 Occupational Health and Safety Act and regulations for Construction Projects.
  - .4 Canadian Environmental Protection Act (CEPA).
  - .5 Canadian Environmental Assessment Act (CEAA).
  - .6 Transportation of Dangerous Goods Act (TDGA).

### **1.3 ASBESTOS AND DESIGNATED SUBSTANCES**

- .1 Demolition of spray or trowel applied asbestos can be hazardous to health. Notify Consultant if material resembling spray or trowel applied asbestos is encountered on site. Stop work and do not proceed with further removal until written instructions have been received from Consultant.
  - .1 Abatement procedures for Asbestos Containing Materials (ACM) pertinent to successful performance of Work to be paid for by Owner, preapproved by Consultant, as an extra cost to Contract.
  - .2 All ACM work to be in compliance with current provincial asbestos abatement regulations for Place of Work.

### **1.4 STORAGE AND PROTECTION**

- .1 Protect existing items designated to remain and items designated for salvage. In event of damage to such items, immediately replace or make repairs to approval of Consultant and at no cost to Owner.
- .2 In all circumstances, ensure that demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
- .3 Protect trees, plants and foliage on site and adjacent properties where indicated.

### **1.5 EXISTING CONDITIONS**

- .1 Prior to start of any demolition work, remove contaminated or hazardous materials from site and dispose of at designated disposal facilities.
- .2 Record and discuss with Consultant any deviations from existing assumed conditions as indicated by drawings and/or specifications.

## **1.6 REGULATORY REQUIREMENTS**

- .1 Ensure all work is performed in compliance with CEPA, CEAA, TDGA, and all applicable provincial regulations.

## **1.7 NOTICE**

- .1 Provide a minimum twenty-four (24) hour notice to Consultant and Owner prior to proceeding with any work that may disrupt building access or services.

## **PART 2 - NOT USED**

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- .1 Examine site with Consultant and verify extent and location of items designated for removal, disposal, recycling, salvage and items to remain. Removal of HVAC units require confirmation by Owner's Representative.
- .2 Locate and protect utilities where applicable. Notify and obtain approval of utility companies before starting demolition.

### **3.2 GENERAL PROTECTION**

- .1 Prevent movement, settlement, or other damage to adjacent structures, utilities, and parts of building to remain in place. Provide engineered bracing and shoring as required.
- .2 Minimize noise, dust, and inconvenience to occupants.
- .3 Protect existing building systems, services and equipment.
- .4 Provide temporary dust screens, covers, railings, supports and other protection as required.
- .5 Provide required signage, barricades, hoarding, overhead protection and temporary egress.
- .6 Support affected structure or building components and if safety of structure being demolished or adjacent structures or services appears to be endangered, take preventative measures and then cease operations and notify Consultant immediately.
- .7 Ensure that demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
- .8 Do not dispose of waste or volatile materials such as: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers. Ensure proper disposal procedures are maintained throughout project.
- .9 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
- .10 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.
- .11 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.

- .12 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all temporary roads.

### 3.3 DEMOLITION SALVAGE AND DISPOSAL

- .1 Remove parts of existing structure or roof system to permit repairs or new installation. Sort materials into appropriate piles for recycling and or reuse.
- .2 Carry in Base Bid Price all costs to salvage, protect from harm, and re-use following components, unless indicated otherwise elsewhere in specifications:
  - .1 Existing skylights, mechanical equipment, cladding, stairs and ladders, satellite and communications equipment, electrical lines, and service lines, etc.
- .3 Refer to drawings and specifications for items identified for reuse or salvage, if applicable.
- .4 Remove items to be reused, store in a protected location, and reinstall under appropriate section of specification.
- .5 Trim edges of partially demolished building elements to suit future use.
- .6 Include for disposal of removed materials to appropriate Landfill and/or recycling facilities, except where specified otherwise, and in accordance with authority having jurisdiction.
  - .1 Where possible, all existing recyclable materials, gravel, asphalt products, etc. to be transported to an appropriate recycling facility.
  - .2 Provide location of local facility receiving removed recyclable materials to Owner and Consultant.
- .7 Dispose of debris on a continuous basis. Do not stockpile debris in a manner which would overload structure, or impede access around site.

### 3.4 SEQUENCE OF OPERATION

- .1 Removal:
  - .1 Remove items as indicated in technical sections, including roofing ballast or gravel, metal roofing flashings, roofing membrane and flashings, roofing insulation, and or vapour retarder.
    - .1 Do not disturb items designated to remain in place.
  - .2 Restrict roofing demolition work to sections in limited size that will be restored and made watertight by end of working day.
  - .3 Use extreme caution when performing demolition work around skylights, sloped glazing, and other force and vibration sensitive roof projections.
- .2 Removal From Site:
  - .1 Interim removal of stockpiled material may be required, if it is deemed to interfere with operations of Owner.
  - .2 Do not overload existing roof structures.
- .3 Salvage:

- .1 Carefully dismantle items containing materials for salvage and stockpile salvaged materials at locations acceptable to Owner and Consultant.
- .4 Disposal of Material:
  - .1 Dispose of materials not designated for salvage or reuse on site to be hauled to an authorized disposal site and or recycling facilities.
- .5 Backfill:
  - .1 Backfill in areas as indicated.

### 3.5 ABANDONED AND UNUSED ITEMS

- .1 Items of unused and/or abandoned rooftop equipment, units, service lines, cabling, and any related supports which are not operational or in use are to be removed and disposed of.
- .2 Existing services for abandoned equipment to be dismantled to below roof deck, and closed off in accordance with local bylaws and Code requirements. Confirm all electrical lockout procedures with Owner's representative.
- .3 Existing roof deck openings to be closed using following guidelines:
  - .1 Openings up to 152mm (6") in diameter or 152x152mm (6"x6"):
    - .1 Metal Decking: Install 610x610mm (24"x24") galvanized steel plate, min. 18ga. secured with 4 screws per side to existing decking.
  - .2 Openings greater than 152mm (6") in diameter or 152x152mm (6"x6"):
    - .1 Wood Planking: Replace with SPF #1 grade boards to match existing thickness. All replacement decking shall have 3 points of bearing. Provide new framing to match original as required.
    - .2 Plywood Decking: Replace with No.1 construction grade plywood sheathing, Good One Side (G1S), to match existing thickness. All replacement decking shall have 3 points of bearing and installed in logical rectangular shapes. New plywood decking to be supported by at least half thickness of roof joist, turrs, or rafter underneath. Provide galv. H-clips to existing decking on unsupported sides.
    - .3 Steel Decking: Obtain ruling from Engineer whether decking is to be replaced or suitably overlaid with identical decking. Secure all decking with TEK screws at each lower flute bearing point structure; welding is not permitted.
    - .4 Concrete Deck: Refer to detail drawing.
  - .3 Openings greater than 915x915mm (3'x3'):
    - .1 Consult Structural Engineer for deck review and design of new framing, decking, securement, and any other required support.

### 3.6 DECK REPAIRS

- .1 Wood Decking: Areas of deteriorated wood planking or plywood decking to be cut out and replaced with new to match existing.

- .2 Metal Decking: Areas of corroded steel decking not requiring replacement to be cleaned using a wire brush to completely remove all evidence of corrosion. Remove all dust and coat with zinc rich epoxy primer to completely cover all areas where corrosion was evident.
- .3 Concrete Decking: Areas of concrete decking with pitted or deteriorated surfaces to be cleaned sufficiently to receive repair material. Repairs to be completed with quick set masonry repair grout trowelled to a smooth even finish, flush with surrounding areas.

### **3.7 RESTORATION**

- .1 Restore areas and existing works outside areas of demolition to match condition of adjacent, undisturbed areas.
- .2 Use only soil treatments and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

### **3.8 CLEANUP**

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.
- .2 Use only cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

**END OF SECTION - 02 41 19**

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## **PART 1 - GENERAL**

### **1.1 SCOPE OF WORK**

- .1 Where existing steel deck is exposed during roof removal and demolition in preparation for installation of a new roof system, exposed steel deck to be examined for any corrosion and deterioration that may impact integrity of new roof system.
- .2 At completion of each day's demolition phase, review existing roof deck condition on all exposed areas with Consultant to determine level of existing steel deck corrosion and corrective action required on various areas.
- .3 Remove or repair varying degrees of corrosion identified with Consultant in accordance with severity of corrosion found:
  - .1 Areas With No Corrosion: Clean and sweep exposed deck.
  - .2 Areas With Light to Moderate Corrosion: Where pitting of base metal does not exceeding 35% of deck thickness, clean, sweep, prep, and install rust inhibiting primer and paint.
  - .3 Areas with Severe Corrosion:
    - .1 On Small Areas: Clean, sweep, install rust inhibiting primer and paint, and overlay section with new metal decking.
    - .2 On Large Areas: Cut out bad sections and install new metal decking. Engineered shop drawings are required for attachment type and loading.
- .4 Photograph and/or collect coupon samples as a basis for corrective actions performed. Provide copies and samples to Consultant where requested.
- .5 Document and chart location of deck repairs and type of repair performed in relation to roof plan. Provide roof map or diagram for deck repair and location to Consultant when requested.

### **1.2 REFERENCE STANDARDS**

- .1 Latest edition of all listed references; most stringent requirements to govern in conflicts:
  - .1 American Society for Testing and Materials (ASTM) International:
    - .1 C726: Mineral Fibre Roof Insulation Board.
    - .2 A606: Steel, Sheet & Strip, High-Strength, Low-Alloy, Hot-Rolled & Cold-Rolled.
    - .3 A653M: Steel Sheet, Zinc-Coated or Zinc-Iron Alloy-Coated by Hot-Dip Process.
    - .4 A792M: Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by Hot-Dip Process.
  - .2 Canadian Standards Association (CAN/CSA):
    - .1 S16: Limit States Design of Steel Structures.
    - .2 S136: North American Design of Cold Formed Steel Structural Members.
    - .3 W47.1: Certification of Companies for Fusion Welding of Steel Structures.
  - .3 Canadian Sheet Steel Building Institute (CSSBI): Standard for Steel Roof Deck 10M
  - .4 Steel Structures Painting Council (SSPC): Surface Preparation Standards
  - .5 Canadian Roofing Contractors Association (CRCA): Roofing and Waterproofing Manual.

### 1.3 SHOP DRAWINGS

- .1 Submit shop drawings where required for review, in accordance with Submittals - Section 01330.
- .2 Shop drawings to outline and indicate:
  - .1 Material types, core thickness, and finishes,
  - .2 Connections, lap lengths, and joint types,
  - .3 Method of anchorage and securement,
  - .4 Number, type, and location of fasteners,
  - .5 Support sizing, spacing, and reinforcement,
  - .6 Any related accessories.
- .3 Only shop drawings bearing review stamps to be kept at work site.
- .4 Reviews of Shop Drawings are for general conformance with design concept and general compliance with information given in contract documents. Contractor responsible for confirming and correlating all quantities and dimensions. Review does not relieve Contractor's responsibility for compliance with intent of drawings and specifications or for accuracy of work.

### 1.4 PROTECTION

- .1 Provide adequate protection to allow for normal operations of facility to continue during performance of work.
- .2 Protect all openings and safeguard all vents, stacks, and roof drains from adverse weather, debris, and any contamination from deck rehabilitation work.
- .3 Proceed with caution, especially around deck openings or at suspected weakened sections of existing roof deck. Employ warning signs, barriers, and/or temporary railings as warranted by existing conditions.
- .4 Use equipment and methods that will not impair performance of roof deck. Any damage by Contractor, or any of his workforce, to be repaired with new materials to restore items to their original condition at no additional cost to Owner.

### 1.5 STORAGE

- .1 Provide adequate storage and protection from elements for hazardous materials at both ground and roof levels.
- .2 Bring to roof only enough new material as may be required for deck rehabilitation work that day.
- .3 Hazardous materials to be stored in a secure location away from public access at ground level at end of each work day.
- .4 Protect steel roof deck during fabrication, transportation, site storage and erection, in accordance with CSSBI Standard 10M.

### 1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials where possible and as required by local, provincial, and national regulations. Include in Bid Price for all tipping fees associated with landfills and recycling depots.
- .2 Fold up metal banding, flatten, and place in designated area for recycling.



## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Steel Roof Decking:
  - .1 Fabricated from ASTM 653M SS Grade 230 with a Z275 galvanized zinc coating. Nominal steel core thickness to be a minimum 1.2 mm (3/64”).
  - .2 Cold rolled metal decking with profile to match existing steel deck. Minimum thickness to be 22 gauge for a two span condition.
  - .3 Where required, sections will have provisions for interlocking side joints.
- .2 Flat Sheet Steel:
  - .1 Fabricated from ASTM 653M SS Grade 230 with a Z275 galvanized zinc coating. Nominal steel core thickness to be a minimum 1.2 mm (3/64”).
  - .2 Flat sheet steel with minimum 22 gauge thickness.
  - .3 Where required, sections will have provisions for interlocking side joints.
- .3 Sheet and Decking accessories:
  - .1 Welding materials: To CSA W59-1984.
  - .2 Galvanizing: Hot dipped galvanizing with zinc coating 600g/m2 to CSA G164-M1981.
  - .3 Zinc Touch-up Coating: Zinc-rich, cold applied galvanizing coating; Galvafruid by W.R. Meadows or Rimkus approved equivalent.
- .4 Fasteners: Meeting Factory Mutual 4470 Standard for wind uplift and corrosion resistance:
  - .1 Screws at Deck Top Flutes:
    - .1 16mm (5/8”) to 32mm (1.25”) long, stainless steel, #14 self tapping AB screws with flat pan head.
  - .2 Screws at Deck Bottom Flutes:
    - .1 16mm (5/8”) to 32mm (1.25”) long, stainless steel, #14 self tapping AB screws with hex washer head.
    - .2 16mm (5/8”) to 32mm (1.25”) long, carbon steel, #10-16 TEK Screws with self tapping drill point and hex washer head
  - .3 Deck Fastening Pins: 4mm (3/16”) diameter shank, galvanized X-EDNK or X-EDN drive pins by Hilti for HSN deck fastening system.
  - .4 Bolts and Anchor Bolts: Galvanized carbon steel or stainless steel to ASTM A307-84a.
- .5 Rust Inhibiting Primer and Finish Coat:
  - .1 Two Component Epoxy Coating:
    - .1 Rust Inhibitor base coat: Amercoat 370, fast drying, self priming, multi-purpose two component epoxy coating by Ameron International and distributed by Amercoat Canada.

- .2 Rust Inhibitor finish coat: Amercoat 370, fast drying, self priming, multi-purpose two component epoxy coating by Ameron International and distributed by Amercoat Canada.
- .2 Alkyd Primer and Finish Coating:
  - .1 Apply one primer coat to prepared metal roof deck areas:
    - .1 Kem-Kromik Rust Inhibitive Metal Primer (B50WZ1) by Sherwin Williams,
    - .2 Glid-Guard Metal Primer 4570 by Glidden,
    - .3 or Rimkus approved equal to above.
  - .2 Apply two finish coats to exposed deck area after primer is dry:
    - .1 Industrial Enamel (B54W101) by Sherwin Williams,
    - .2 Glid-Guard Alkyd Industrial Enamel 4550 by Glidden,
    - .3 or Rimkus approved equal to above.

**2.2 FABRICATION**

- .1 Fabricate new steel deck to match thickness and profile of existing deck.
- .2 Fabricate items from steel unless otherwise noted.
- .3 Where possible, fit and shop assemble work, ready for erection.
- .4 Do all welding work in accordance with CSA W59-1984 unless specified otherwise.
- .5 When welding, use puddle welds with a diameter of 22mm (7/8") to attach new metal decking.
- .6 Provide corrosion protection and seal to exterior steel fabrications in accordance with CAN3-S16.1-M84.

**PART 3 - EXECUTION**

**3.1 DETERMINE LEVEL OF CORROSION:**

- .1 On All Exposed Metal Roof Deck Areas: Review and examine surface of exposed metal roof deck with Consultant to determine level of deck corrosion and corresponding corrective action required. Consult licensed Structural Engineer as required and include any related costs in Bid Price. Refer to Table 1 – Measuring Metal Thickness below for extent of corrosion.
  - .1 Do not use flat faced micrometer. Use needle point micrometer only, measuring at a typical pit. For painted or primed decking, clean all coating from deck prior to measuring thickness.
- .2 Table 1 – Measuring Metal Thickness:

1	2	3	4
Gauge No.	Uncoated, Minimum Thickness, Inches	Galvanized Thickness, Inches	Maximum allowable Depth of Pitting, 35% of Uncoated Metal Thickness
24	0.0239	0.0276	0.008 (8 mils)
22	0.0295	0.0336	0.010 (10 mils)
20	0.0358	0.0396	0.013 (13 mils)
18	0.0474	0.0516	0.017 (17 mils)

- .1 Note: Thicknesses in Column 2 are based on industry values.
- .2 Note: Values in Column 4 are measured from top surface of uncoated sheet. Clean paint, primer, and galvanizing for measurements.

### 3.2 LEVEL 1: NO VISIBLE CORROSION

- .1 No damage found to base metal or damage to deck coating.
- .2 Deck Surface Cleaning:
  - .1 Broom clean. Vacuum and/or wipe with clean cloths all flanges, webs, and ribs clear of all dust and debris.
  - .2 Do not use compressed air. Use leaf-type blowers only with approval of Consultant.
  - .3 Remove all loose dirt, debris, moisture, oil, grease, loose mill scale, welding slag, or other contaminants from surface.



**Photo of Level 1: No Visible Corrosion**

### 3.3 LEVEL 2: LIGHT TO MODERATE CORROSION

- .1 Surface of coating is sporadically damaged but there is no pitting or deterioration of base metal. In areas where decking is lightly to moderately corroded, but determined to be adequate to support design loads, sweep deck clean, prime, and paint with a two coat application:
  - .1 Light Corrosion: Freckled corrosion.
  - .2 Moderate Corrosion: Coating no more than 50% damaged with pitting of base metal not exceeding 35% of deck thickness as indicated in Table 1 – Measuring Metal Thickness.
  - .3 Areas without corrosion do not require primer and coating application.
- .2 Deck Surface Cleaning:
  - .1 Broom clean. Vacuum and/or wipe with clean cloths all flanges, webs, and ribs clear of all dust and debris.
  - .2 Do not use compressed air. Use leaf-type blowers only with approval of Consultant.
- .3 Deck Preparation and Sanding:
  - .1 All surfaces (top and bottom of roof deck) are to be cleaned using hand tools to SSPC-SP-2 surface preparation standard.
  - .2 Remove all loose corrosion, dirt, moisture, oil, grease, loose mill scale, welding slag, or other contaminants from surface that may inhibit bond of new coating.
  - .3 Remove loose rust, paint, rust scale, and mill scale, etc. by wire brushing or hand sanding. Tight corrosion (corrosion not removed by above methods) and corrosion bloom may remain.
  - .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil, and solvents before primer coat is applied and between applications of remaining coats. Apply primer or paint as soon as possible after cleaning and before further deterioration occurs.
- .4 Deck Primer Application:
  - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces to original condition at no additional cost to Owner.
  - .2 Plug small holes in deck before primer and coating application. Where possible, plug holes from underside of decking. Pack openings and gaps at projections and perimeters with batt or spray urethane foam insulation to minimize seepage of primer, coatings, and related fumes into building.
  - .3 Review service preparation with Consultant before start of primer application. Do not apply coatings when surface or ambient air temperature falls below 5°C (41°F).
  - .4 Mix two component epoxy coatings or thoroughly mix rust inhibiting primer as per Manufacturer's written instructions. Periodically mix contents of coatings during application to avoid settlement.
  - .5 Do not thin coating mixtures unless otherwise approved by Manufacturer and Consultant.
  - .6 Apply over prepared areas, self priming epoxy base coat to a dry thickness of 3 mils or rust inhibiting metal primer applied at a rate of 8m<sup>2</sup>/litre (330 ft<sup>2</sup>/gallon).



- .7 Apply coating by brush, roller, or airless sprayer to Manufacturer's instructions.
- .5 Deck Coating Application:
  - .1 Do not apply coatings when surface or ambient air temperature falls below 5°C (41°F).
  - .2 Sand and dust between coats where required by manufacturer to provide adequate adhesion for next coat and to remove visible defects.
  - .3 Mix two component epoxy coatings or thoroughly mix rust inhibiting coating to Manufacturer's instructions. Periodically mix contents of coatings to avoid settlement.
  - .4 Do not thin coating mixtures unless otherwise approved by Manufacturer and Consultant.
  - .5 Apply over epoxy base coat/primed areas, a single epoxy finish coat to a dry thickness of 5 mils or two coats of rust inhibiting metal coating applied at a rate of 8m<sup>2</sup>/litre (330 ft<sup>2</sup>/gallon) per coat.
  - .6 Apply coating by brush, roller, or airless sprayer to Manufacturer's instructions.
  - .7 Allow sufficient time for drying between coats. Dry timing affected by current weather conditions. Refer to Manufacturer's written instructions.
  - .8 Allow finish coating to dry-to-touch prior to allowing traffic or vapour retarder installation.



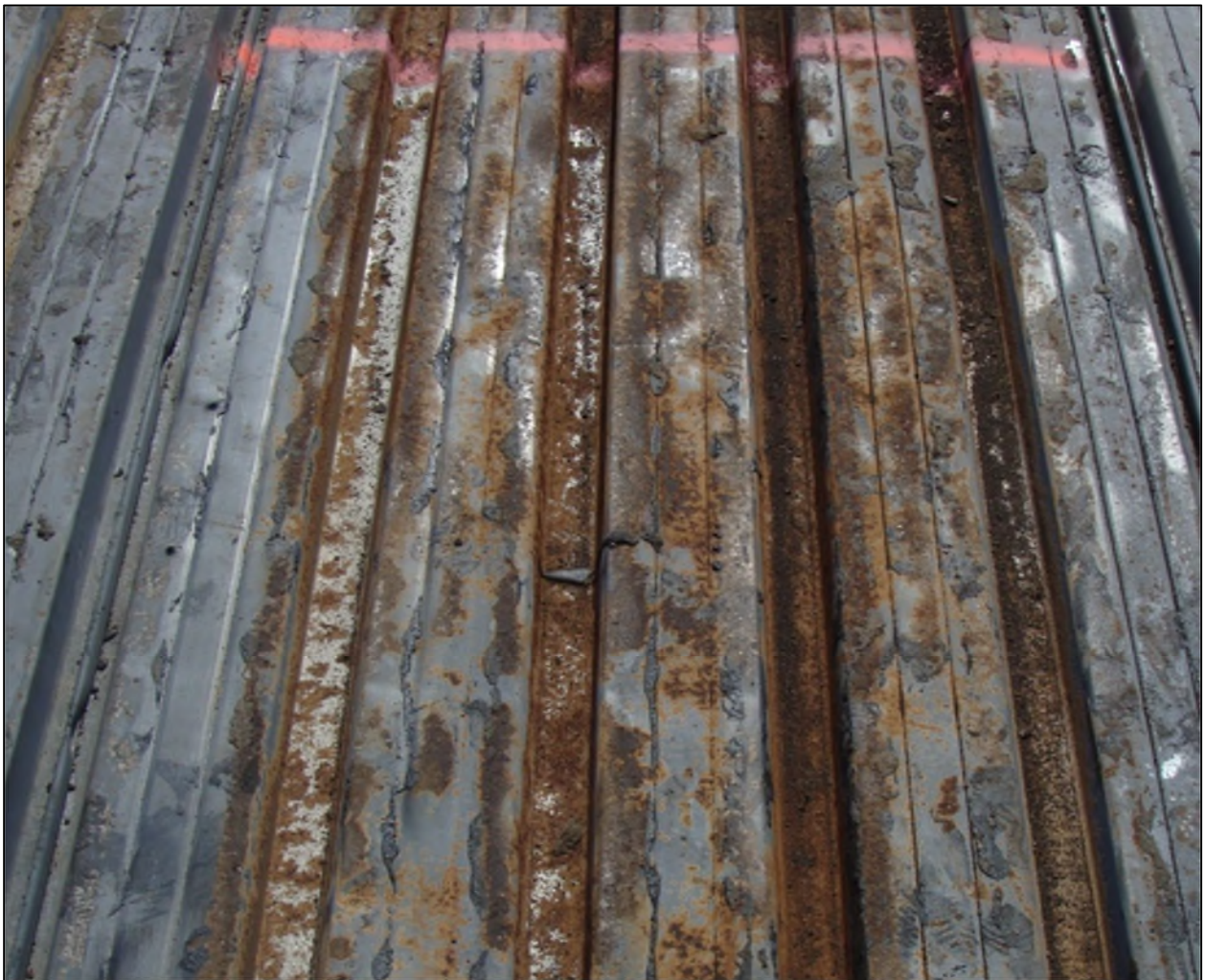
**Photo of Level 2: Light to Moderate Corrosion**

### 3.4 LEVEL 3: SEVERE CORROSION, NO HOLES OR PENETRATIONS

- .1 Areas with damage to more than 50% of surface coating and with base metal pitting greater than 35% of deck thickness, as indicated in Table 1, but with no holes or full penetration corrosion:
  - .1 In areas where decking is severely corroded, but determined to be adequate to support design loads, sweep deck clean, prime, paint with a two coat application, and install new metal deck overlay over existing.
- .2 Deck Surface Cleaning:
  - .1 Broom clean. Vacuum and/or wipe with clean cloths all flanges, webs, and ribs clear of all dust and debris.
  - .2 Do not use compressed air. Use leaf-type blowers only with approval of Consultant.
- .3 Deck Preparation and Sanding:
  - .1 All surfaces (top and bottom of roof deck) are to be cleaned using hand tools to SSPC-SP-2 surface preparation standard.
  - .2 Remove all loose corrosion, dirt, moisture, oil, grease, loose mill scale, welding slag, or other contaminants from surface that may inhibit bond of new coating.
  - .3 Remove loose rust, paint, rust scale, and mill scale, etc. by wire brushing or hand sanding. Tight corrosion (corrosion not removed by above methods) and corrosion bloom may remain.
  - .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil, and solvents before primer coat is applied and between applications of remaining coats. Apply primer or paint as soon as possible after cleaning and before further deterioration occurs.
- .4 Deck Primer Application:
  - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces to original condition at no additional cost to Owner.
  - .2 Plug small holes in deck before primer and coating application. Where possible, plug holes from underside of decking.
  - .3 Pack openings and gaps at projections and perimeters with batt or spray urethane foam insulation to minimize seepage of primer, coatings, and any related fumes into building interior.
  - .4 Do not begin application of primer until surface preparation has been reviewed with Consultant.
  - .5 Do not apply new coatings when deck surface or ambient air temperature falls below 5°C (41°F).
  - .6 Mix two component epoxy coatings or thoroughly mix rust inhibiting primer as per Manufacturer's written instructions. Periodically mix contents of coatings during application to avoid settlement.
  - .7 Do not thin coating mixtures unless otherwise approved by Manufacturer and Consultant.

- .8 Apply over prepared areas, self priming epoxy base coat to a dry thickness of 3 mils or rust inhibiting metal primer applied at a rate of 8m<sup>2</sup>/litre (330 ft<sup>2</sup>/gallon).
- .9 Apply coating by brush, roller, or airless sprayer conforming to Manufacturer's application instructions.
- .5 Deck Coating Application:
  - .1 Do not apply coatings when surface or ambient air temperature falls below 5°C (41°F).
  - .2 Sand and dust between coats where required by manufacturer to provide adequate adhesion for next coat and to remove visible defects.
  - .3 Mix two component epoxy coatings or thoroughly mix rust inhibiting coating as per Manufacturer's written instructions. Periodically mix contents of coatings during application to avoid settlement.
  - .4 Do not thin coating mixtures unless otherwise approved by Manufacturer and Consultant.
  - .5 Apply over epoxy base coat/primed areas, a single epoxy finish coat to a dry thickness of 5 mils or two coats of rust inhibiting metal coating applied at a rate of 8m<sup>2</sup>/litre (330 ft<sup>2</sup>/gallon) per coat.
  - .6 Apply coating by brush, roller, or airless sprayer conforming to Manufacturer's application instructions.
  - .7 Allow sufficient time for drying between coats. Dry timing affected by current weather conditions. Refer to Manufacturer's written instructions.
  - .8 Allow finish coating to dry-to-touch prior to allowing traffic, or vapour retarder installation.
- .6 New Steel Deck Overlay:
  - .1 Overlay existing metal deck with new steel decking. On smaller corroded areas use a minimum of 2-span condition. Larger corroded areas to require continuous 3-span overlay condition.
    - .1 New steel deck is to be free of dirt, scale or foreign matter prior to installation. At discretion of Consultant, damaged or substandard roof deck sections are to be removed from site and replaced with new at no additional cost to Owner.
  - .2 Contractor to verify configuration, coverage, and span of metal decking. Submit engineered and stamped shop drawings for review prior to ordering materials.
  - .3 Overlay section of new galvanized steel decking over existing corroded deck with matching profile and depth. Overlay decking must bear on support steel for a minimum of 76mm (3.0").
    - .1 On Wide Rib Metal Deck: Use min. 22 gauge intermediate rib, primed deck for 3-span condition and use min. 20 gauge for less than 3-span overlay.
    - .2 On Intermediate Rib Metal Deck: Use min. 22 gauge narrow rib, primed deck for 3-span condition and use min. 20 gauge for less than 3-span overlay.
    - .3 On Narrow Rib Deck: Do not overlay narrow rib deck. Proceed to deck replacement as outlined and specified in Level 4 – Severe Corrosion With Holes.
  - .4 Place steel deck sections in final position and confirm minimum bearing on the structural supports prior to securing or fastening in place.

- .5 All new sections of decking to be mechanically attached to each supporting steel joist or beam underneath with self drilling TEK screws or Hilti fastening pin system at each flute.
  - .1 Install deck fasteners transverse to deck run, in bottom flutes of deck at a minimum of four (4) per 915mm (36") wide deck unit. Install pan head screws at top flutes of deck as required to ensure snug fit of overlay decking into existing and to eliminate gaps and lifting at edges of overlay.
  - .2 Install deck fasteners longitudinal to deck run, in bottom flutes of deck at every intersection with supporting structural members beneath.
  - .3 Ensure new steel roof deck units are adequately fastened to structural supports. Maximum spacing of fasteners along bearing supports will be lesser of: 400 mm (16") or two deck flute spacings.
  - .4 All decking side laps to be mechanically attached with self drilling TEK screws at quarter points (i.e. three between joists). Side laps of adjacent units to be fastened at intervals not greater than 915 mm (36").
- .6 Once new decking has been secured in place, all cut and exposed metal edges are to be field coated with a zinc-rich coating.



**Photo of Level 3: Severe Corrosion, No Holes, or Penetrations**



### 3.5 LEVEL 4: SEVERE CORROSION WITH HOLES

- .1 Areas with existing steel deck that is severely corroded, deteriorated, pitted, and otherwise damaged with holes and penetrations through entire deck thickness.
  - .1 In areas where decking has corroded damage as described above, and is determined to be unsatisfactory and inadequate to support design loads for installation of new roof, sections of existing roof deck are to be removed and replaced with new materials to match existing profile.
    - .1 Small corroded holes and penetrations may be overlaid with new metal decking or flat sheet plate after cleaning, priming, and coating of area underneath.
    - .2 Large areas require complete deck removal back to structural joists and framing and installation of new decking. Provide engineered shop drawings to determine design, attachment, and loading requirements.
- .2 Deck Removal and Preparation:
  - .1 Provide adequate interior protection over working areas to catch falling dirt and debris. Co-ordinate required work with Owner and Building Representative.
  - .2 Clear off all loose material, dirt, and debris from top surface of deck to reduce or prevent debris from falling into building interior during deck demolish.
  - .3 Saw-cut deck at joists using a reciprocal saw, nibbler, or other technique pre-approved by Consultant. No gas cutting or abrasive cut-off saws are permitted.
  - .4 Shear welds or deck-to-joist screws where required for deck removal.
  - .5 During deck removal of corroded sections, no existing metal roof deck is to be left in a single span condition. Remove remaining section of existing metal deck and install new decking in a multi-span condition.
  - .6 Prior to removal, vacuum all flanges, webs, and ribs to clear off any cutting dust or debris.
  - .7 Carefully remove deck sections from above.
  - .8 Vacuum top surface of suspended ceiling, if present, and remove all demolition debris prior to installing new decking.
- .3 New Steel Deck Installation:
  - .1 Where required in new engineered design, reinforce underside of metal deck opening with new steel angles and framing members.
  - .2 Installing new steel roof deck with matching profile to restore integrity and continuity of roof deck to original condition.
  - .3 Deck replacement at single span conditions will require installation of heavier gauge decking. Use new 16 or 18 gauge steel decking in accordance with printed data sheets from Manufacturer of original deck.
  - .4 Erect all metal work square, plumb, straight and true, accurately fitted, with tight joints and intersections.
  - .5 All new sections of steel decking to be mechanically attached to each supporting steel joist or beam underneath at each flute. New metal deck sections may be installed by welding or mechanically attaching using Hilti deck fastening system or self drilling screws.

- .1 Steel roof deck units to be adequately fastened to structural supports. Maximum spacing of fasteners along bearing supports will be lesser of: 400 mm (16") or two flute spacings.
- .2 Where welding is specified, arc spot welds to have a 20 mm (3/4") nominal top diameter. Steel deck welder must be certified under CSA W47.1 for fusion welding of steel roof decks.
- .3 Install deck fasteners longitudinal to deck run, in bottom flutes of deck at every intersection with supporting structural members beneath.
- .4 Apply Button Punch fastening or stitch screws along side lap connections of new metal decking with original decking at a maximum spacing of 305mm (12") o.c.
- .6 Once new decking has been secured in place, touch up welds as required on top surface of steel roof deck with a compatible zinc-rich primer.
- .7 Field apply zinc-rich coating to all cut and exposed metal edges.



**Photo of Level 4: Severe Corrosion With Holes**

### **3.6 CLEAN UP**

- .1 Clean up any accidental spills and leaks immediately. Follow with Manufacturer's written instructions for clean up and disposal.
- .2 Perform daily and final clean-up of work area and areas surrounding site. Remove all debris from roof and site daily, and dispose of to suitable location for construction waste.

**END OF SECTION - 05 01 31**

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## **PART 1 - GENERAL**

### **1.1 APPLICABLE PUBLICATIONS**

- .1 All codes, standard specifications and by-laws referred to in this section shall be current editions including all revisions, addenda and supplements.
  - .1 CAN/CSA-G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel.
  - .2 CAN/CSA-S16.1-01, Limit States Design of Steel Structures.
  - .3 CSA W48-01, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
  - .4 CSA W59-1989(R2001), Welded Steel Construction (Metal Arc Welding) (Imperial Version).
  - .5 Ontario Ministry of Labour – Engineering Data Sheet 2-04
  - .6 Ontario Building Code and associated regulations
  - .7 National Building Code of Canada

### **1.2 SHOP DRAWINGS**

- .1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit drawings stamped and signed by qualified professional engineer licensed in Province of Ontario, Canada.
- .3 Show complete layout including plan views and elevations for each specific case.
- .4 Submit manufacturer's specifications and installation instructions for all components of each product.
- .5 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.
- .6 Indicate cuts, copes, connections, holes, threaded fasteners, welds and other items. Indicate welds using welding symbols as shown in Appendix A of CSA W59.2.

### **1.3 PROTECTION**

- .1 Deliver, store, handle and protect materials for normal shipping conditions.
- .2 Cover exposed stainless steel surfaces with pressure sensitive heavy protection paper or apply strippable plastic coating, before shipping to job site.
- .3 Leave any protective coverings in place until final cleaning of building. Provide instructions for removal of protective covering.

### **1.4 QUALITY ASSURANCE**

- .1 Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .2 Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

- .3 The company completing work of this Section shall have previous Canadian experience in the successful manufacture and installation of work, type and quality shown and specified over a minimum 5-year period.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- .1 CSA approved prefabricated ladder assembly to suit application.

### **2.2 FABRICATION**

- .1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
- .2 Use self-tapping shake-proof flat round oval headed screws on items requiring assembly by screws or as indicated.
- .3 Where possible, fit and shop assemble work, ready for erection.
- .4 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

### **2.3 ACCESS LADDER**

- .1 Manufacture and install ladders that are shown in the Drawings and Details portion of this document.
- .2 All ladders,
  - .1 shall be vertical;
  - .2 shall have side rails which:
    - .1 permit a power grip;
    - .2 are at least 400 millimetres apart;
    - .3 extend at the upper level at least 900 millimetres above the landing surface;
    - .4 are sized minimum 10mm x 65mm;
  - .3 shall have rungs which:
    - .1 are minimum 20mm diameter, capable of withstanding a concentrated live load of 1.1kN;
    - .2 are spaced at 300 millimetres on centres;
    - .3 have clear spacing of 150mm min from wall or interfering surfaces;
    - .4 are non-slip;
  - .4 shall be located so that an adequate landing surface that is clear of obstructions is available at the top and bottom of the ladder
  - .5 shall be attached/anchored to structure:
    - .1 using bolts no less than 12mm in diameter;

- .2 at distances no greater than 3m;
- .6 which have a height greater than 5m above ground or an adjacent surface shall have a safety cage which:
  - .1 is not less than 680mm wide;
  - .2 extends between 680mm and 760mm from the centre-line of the rungs;
  - .3 has horizontal loops at 600mm on centre;
  - .4 begins no more than 2.2m from grade/roof/platform.
- .3 Shop Drawings
  - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

## **PART 3 - EXECUTION**

### **3.1 ERECTION**

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.
- .2 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- .3 Provide suitable means of anchorage acceptable to Consultant as specified in the drawings.
- .4 Substrate shall be concrete or solid grouted concrete block to utilize an adhesive anchoring system. Brick or stud walls shall employ through bolting with a back-up plate.
- .5 Make field connections with bolts to CAN/CSA-S16.1, or weld.
- .6 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .7 Provide components for building by other sections in accordance with shop drawings and schedule.
- .8 Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection with primer.
- .9 Touch-up galvanized surfaces with zinc rich primer where burned by field welding.

### **3.2 ACCESS LADDER**

- .1 Install access ladders in locations as indicated.
- .2 Erect with top rung level with egress.
- .3 Erect with bottom rung no greater than 300mm from landing surface.

### **3.3 CLEANING**

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION - 05 51 00**



## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 02 41 19 – Selective Demolition and Removal
- .2 Section 07 52 16 – SBS Modified Bituminous Membrane Roofing
- .3 Section 07 62 00 – Prefinished Sheet Metal Flashing and Trim

### **1.2 REFERENCES**

Latest edition of listed references apply; most stringent requirement to govern in case of conflict.

- .1 American Lumber Standards Committee (ALSC):
  - .1 Softwood Lumber Standards.
- .2 American Society for Testing and Materials (ASTM) International:
  - .1 A153M-16a: Standard Specification for Zinc Coating (Hot-Dip) on Iron & Steel Hardware.
  - .2 A653M-15e1: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
  - .3 D1760-01: Standard Specification for Pressure Treatment of Timber Products.
- .3 American Wood-Protection Association (AWPA):
  - .1 AWPA E12: Standard Method of Determining Corrosion of Metal in Contact with Wood.
  - .2 AWPA M4: Standard for the Care of Preservative Treated Wood Products.
  - .3 AWPA P5: Standard for Waterborne Preservatives.
  - .4 AWPA P26: Standard for Alkaline Copper Quat Type A (ACQ-A).
  - .5 AWPA P27: Standard for Alkaline Copper Quat Type B (ACQ-B).
  - .6 AWPA P28: Standard for Alkaline Copper Quat Type C (ACQ-C).
  - .7 AWPA P29: Standard for Alkaline Copper Quat Type D (ACQ-D).
  - .8 AWPA U1: Use Category System: User Specification for Treated Wood.
- .4 Canadian Standards Association (CAN/CSA):
  - .1 B111-1974 (R2003): Wire Nails, Spikes and Staples.
  - .2 G164-M92 (R2003): Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .3 O121-17: Douglas Fir Plywood.
  - .4 O141-05 (R2014): Softwood Lumber.
  - .5 O151-17: Canadian Softwood Plywood.
  - .6 O325-16: Construction Sheathing.
- .5 Engineered Wood Association (EWA); formerly American Plywood Association (APA):
  - .1 Product Guide: Grades and Specifications.
- .6 National Forest Products Association (NFPA):
  - .1 Grading Rules.
- .7 National Lumber Grades Authority (NLGA):
  - .1 Standard Grading Rules for Canadian Lumber (2014).

### 1.3 QUALITY ASSURANCE

- .1 Lumber identification to be by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood identification to be by grade mark in accordance with applicable CSA standards.
- .3 Plywood, OSB and wood based composite panel construction sheathing identification to be by grademark in accordance with applicable CSA standards.
- .4 At all times during Work, Contractor will have on site a qualified project supervisor. It will be Supervisor's responsibility to ensure that Work is carried out in an efficient manner, according to Plans and Specifications.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Protect lumber and other products from dampness both during and after delivery at site.
- .2 Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.
- .3 Stack plywood and other board products so as to prevent warping.
- .4 Locate stacks on well drained areas, supported at least 152mm (6") above grade and cover with well ventilated sheds having firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

### 1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Set aside damaged wood and dimensional lumber off-cuts for acceptable alternative uses (e.g. bracing, blocking, cripples, bridging, finger-joining, or ties). Store this separated reusable wood waste convenient to cutting station and area of work.
- .2 Separate and recycle waste materials in accordance with applicable local, provincial and national regulations. Include for tipping fees associated with landfills and recycling depots
- .3 Unused preservatives and fire retardant materials are to be diverted from landfill through disposal at a special wastes depot.
- .4 Do not burn scrap at project site.
- .5 Fold up metal banding, flatten, and place in designated area for recycling.

## PART 2 - PRODUCTS

### 2.1 LUMBER MATERIALS

- .1 Materials to be best merchantable lumber, straight and sized and shaped to correct dimensions from nominal sizes noted on drawings. Lumber to be selected from well seasoned stock, free from loose resinous knots, shakes, waxed edges, splits, dry rot or other defects which would impair strength or durability.
- .2 Lumber in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .3 Unless specified otherwise all framing members to be No.1/No.2 SPF.

- .4 All materials directly exposed to exterior to be pressure treated unless noted otherwise on drawings or elsewhere in specification.
- .5 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers to be pressure treated where exposed to exterior elements.
- .6 Moisture Content:
  - .1 At time of delivery and maintained at site.
  - .2 Boards and lumber 51mm (2") and less in thickness: 19% or less.
  - .3 Lumber over 51mm (2") thick: 25% or less.
- .7 Preservative Treatment:
  - .1 All wood exposed to exterior environmental conditions, in contact with concrete or masonry to be treated with roof preservative.
  - .2 Do not treat Heart Redwood and Western Red Cedar.
  - .3 Treat wood members and plywood exposed to weather or in contact with plaster, masonry or concrete, including framing of open roofed structures; sills, sole plates, furring, and sleepers that are less than 610mm (24") from ground; nailers, edge strips, blocking, crickets, curbs, cant, vent strips and other members used in connection with roofing and flashing materials.
  - .4 Treat other members specified as preservative treated (PT).
  - .5 Preservative treatment by pressure method to ASTM D1760; except any process involving use of prohibited Chromated Copper Arsenate (CCA).

## 2.2 PANEL MATERIALS

- .1 Douglas fir plywood (DFP): to CSA O121, standard construction, Good one side (G1S) when in contact with roofing membrane.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction, Good one side (G1S) when in contact with roofing membrane.
- .3 Plywood, OSB and wood based composite panels: to CAN/CSA-O323.

## 2.3 ACCESSORIES

- .1 Bent metal plate: 18ga or 22ga, galvanized metal sheet, formed as required or as indicated on drawings to provide support for wood blocking or roof assembly components.
- .2 Anchorage to hollow masonry and gypsum walls: Galvanized toggle bolts.
- .3 Anchorage to solid masonry or concrete: Expansion shields and lag bolts:
  - .1 Rawl mushroom head lead anchors, min 6mm (0.25") diameter for sheathing,
  - .2 Hilti Kwik-Bolts for structural members.
- .4 Anchorage of wood members to sheet steel studs: Corrosion coated screws, min #14 thread, of length to penetrate minimum 19mm (0.75") through material into base.
- .5 Nails: Minimum 6d, hot dip galvanized spiral or ring shank nails, length to penetrate through material 38mm (1.5") into base.

- .6 Anchorage of wood blocking to masonry: Masonry screws, Tapcon anchors of sufficient length to penetrate 32mm (1.25”) into masonry surfaces.
- .7 Batt Insulation: Stone wool mineral fiber batt insulation, Rockwool by Roxul Inc.
- .8 Explosive actuated fastening devices are prohibited for use on this project.

## 2.4 ACCESSORY FINISHES

- .1 Galvanizing: to CAN/CSA-G164:
  - .1 galvanized fasteners for all exterior work unless otherwise specified
  - .2 galvanized fasteners for all high interior humid areas unless otherwise specified
- .2 Use stainless steel type 304 where noted on drawings

## PART 3 - EXECUTION

### 3.1 PREPARATION

- .1 Comply with safety regulations and applicable bylaws governing work included in this section. Provide and maintain necessary barriers, guards and rails.
- .2 Scope of work includes parapet wall, roof joint, and wall modifications as indicated on drawings or as required to provide a secure, smooth surface to receive the new roof and flashing assembly:
  - .1 Install wood blocking secured into existing surfaces adequately to resist movement and wind uplift forces as per FMG 1-49, minimum 200 pounds/foot.
  - .2 Install mineral fiber insulation at all voids and as indicated on drawings.
  - .3 Install plywood sheathing to drawings.
- .3 Complete wood blocking and sheathing to walls, curbs and drains as indicated on drawings.

### 3.2 SITE APPLIED WOOD TREATMENTS

- .1 Treat only wood blocking which will remain exposed to the elements.
- .2 Treat ends of site cut surfaces of materials delivered to site with wood preservative.
- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

### 3.3 INSTALLATION

- .1 Comply with requirements of Provincial Building Code at Place of Work, supplemented by following paragraphs:
  - .1 Ensure continuity and completeness of vapour retarder membrane as coinciding with new wood blocking installation.
  - .2 Provide mineral wool insulation to fill voids at roof deck level or as otherwise required or indicated on detail drawings.
  - .3 Install furring and blocking as required to space-out and support new walls, window projections and louver extensions, fascia, soffit, siding and other work as required.
  - .4 Align and plumb faces of furring and blocking to tolerance of 1:600.

- .5 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .6 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure with adequate fasteners.
- .7 Install sleepers as indicated.

### **3.4 ERECTION**

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.

**END OF SECTION - 06 10 00**

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## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 07 62 00 – Sheet Metal Flashing and Trim.
- .2 Section 07 92 00 - Joint Sealants.

### **1.2 REFERENCES**

- .1 All codes, standard specifications and by-laws referred to in this section shall be current editions including all revisions, addenda and supplements.
  - .1 American Society for Testing and Materials (ASTM):
    - .1 ASTM A 591/A 591, Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications
    - .2 ASTM A 606, Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance
    - .3 ASTM A 653/A 653, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
    - .4 ASTM A 792/A 792, Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
  - .2 Canadian Standards Association (CSA):
    - .1 CAN3-S136.1, "Cold Formed Steel Structures Members"
    - .2 CGSB 93-GP-3, "Sheet Steel, Galvanized Prefinished, 1985"
    - .3 CAN/CGSB-93.1, Sheet, Aluminum Alloy, Prefinished, Residential

### **1.3 SUBMITTALS**

- .1 Product data: submit manufacturer's printed product literature, specifications and data sheet.

### **1.4 SHOP DRAWINGS**

- .1 Upon award of the Contract and prior to commencing installation, submit Shop Drawings, certified by a Professional Engineer licensed to practice in the province of Ontario detailing all component members and method of attachment.
- .2 Submit engineer stamped shop drawings to Consultant for review prior fabrication.
- .3 Shop Drawings to detail all component members and method of attachment of the metal cladding system, including but not limited to: method of anchorage/fastening, type of fasteners and spacing, type of material, thickness and finishes.
- .4 Indicate locations, dimensions, openings and requirements of related work.
- .5 Submit manufacturers installation instructions indicating special procedures, surface preparation, perimeter conditions requiring special attention, and site specific details;

### **1.5 DESIGN AND PERFORMANCE REQUIREMENTS**

- .1 The new metal cladding system shall be designed to resist wind loading as defined by New Brunswick Building Code, 2020 self-weight and gravity loading.
- .2 Design and install metal cladding system to meet the following requirements:
- .3 Design Principle: Provide adequate drainage of water from rain screen cavity.
- .4 Appearance:
  - .1 Exposed surfaces: free from distortion, waves, twists and buckles.
  - .2 Fasteners: concealed, to match existing surrounding system.
- .5 Structural loads:
  - .1 Resist all expected live and dead loads including positive and negative wind pressures expected in this geographical area with a maximum allowable deflection of 1/180 of span.
  - .2 Components shall not vibrate or rattle when subjected to the effects of wind.
- .6 Moisture control: prevent infiltration of water and snow into system.
- .7 Thermal movement: accommodate expansion and contraction of component parts without causing buckling, failure of joint seals, undue stress on fasteners and other detrimental effects. Thermally isolate cladding from supporting work.

## 1.6 QUALITY ASSURANCE

- .1 Manufacturer to certify that steel siding as supplied meets or exceeds the required conditions outlined in this section;
- .2 Installer to have no less than ten (10) years of experience with products specified.
- .3 Reference Standards: comply with applicable requirements of CSSBI, except where specified otherwise herein.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver and store materials to manufacturer's instructions and CSSBI guidelines.
- .2 All materials are to be delivered to site in their original packaging clearly marked with the manufacturer's name, the siding style, color, and identifying lot number
- .3 Do not store materials on roof.
- .4 Handle material in a manner to prevent damage. Take all necessary precautions to prevent siding bending or deflecting under self-weight. Do not store other material on top of siding.
- .5 Store materials off the ground in a clean and dry area away from exposure to direct sunlight.
- .6 Remove and replace damaged material.

## 1.8 MOCK-UP

- .1 At the discretion of the Consultant, carry out repairs at a selected location to confirm the procedures, materials, and standards for future work.
- .2 Approved mock-up installations will establish the minimum acceptable quality of workmanship and will serve as the standard by which subsequent work will be compared for acceptance.



- .3 Approved mock-ups may be part of the finished work.

## 1.9 WARRANTY

- .1 Warranty will include for all defects or deficiencies which are to be rectified by the approved constructor at no additional cost to the Owner during the warranty period. The warranty will include defects resulting from workmanship and/or defects in materials.
- .2 Provide a written guarantee, signed and issued in the name of the owner, covering the metal cladding/siding material for 10 (ten) years or manufacturer's standard lifetime limited warranty and workmanship for a period of two (2) years from the date of Substantial Completion.
- .3 Areas which prove to be defective in any way shall be repaired or replaced and any damage to other work as a result of such defects shall be repaired at no cost to the Owner.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Metal Cladding:
  - .1 Galvanized steel not less than 24 gauge (0.61mm) in thickness and having a Z275 Zinc coating.
  - .2 Profile to be vertical corrugated metal – profile to match existing.
  - .3 Manufacturer: Agway, Vicwest, or approved equivalent.
  - .4 Coating:
    - .1 Stelcoulor 10000 Series™
    - .2 Silicone Modified Polyester (SMP) – Weather X by Vic West,
    - .3 Or Approved Equal
  - .5 **Colour to match existing surrounding metal cladding.**
- .2 Concealed Framing:
  - .1 Sub girts, spacers, clips, closures, brackets and supports to ASTM A653, Grade A, hot-dipped galvanized minimum Z275 after fabrication.
- .3 Metal Flashing:
  - .1 Minimum 0.61mm (24 gauge)
  - .2 Flashings, closure strips to galvanized steel, Z275 zinc coating designation to ASTM A653, prefinished. Colour to match cladding panels.

### 2.2 ACCESSORIES

- .1 Transition Sheet Membrane
  - .1 Blueskin PE 200 HT by Henry, Lastobond Shield HT by Soprema or approved equal
  - .2 Weather Barrier Membrane
  - .3 Wall Shield as distributed by SRP Canada

- .2 Primer:
  - .1 As per manufacturers recommendations for temperatures occurring during course of Work.
- .3 Fasteners for Metal to Metal:
  - .1 A304 stainless steel sheet metal screws self-drilling, as manufactured by Fabco Fastening Systems, Atlas, Perma-Grip, or approved equivalent.
- .4 Anchors for Cladding Framing:
  - .1 Stainless Steel.
- .5 Rivets:
  - .1 Stainless steel with pan heads painted after installation.
- .6 Dissimilar Materials:
  - .1 Protect material from electrolytic action when dissimilar metals are in contact with one another.
  - .2 Paint the mating surfaces of aluminum and galvanized steel with bituminous or zinc chromate primers. Taping or gasketing with non-absorptive materials or sealants is also acceptable.
- .7 Isolation Coating:
  - .1 Alkali resistant bituminous paint meeting CGSB1-108C-Type 2.

## **2.3 CAULKING**

- .1 Sealants: Section 07 92 00 – Joint Sealants.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- .1 Do not begin installation until substrates have been properly prepared and approved by the Consultant and the siding Manufacturer.
- .2 Examine the drawings and specifications to determine the extent of the work involved, together with other data affecting the work, as in no circumstances will any claims against the Owner be allowed resulting from failure to ascertain the extent of such work shown, herein described or implied.
- .3 Examine work of other trades over which metal panels will be applied, for conformity to drawings. Report all discrepancies to consultant before beginning work.
- .4 Make all field measurements necessary to ensure a perfect fit of all members.
- .5 Confirm that all critical dimensions are as specified in the drawings. Commencement of installation will imply acceptance of the substrate as suitable for siding.

### **3.2 PREPARATION**

- .1 Examine, clean, and repair the substrate as necessary. All substrate flaws or defects must be repaired prior to commencing steel siding installation.

- .2 The wall substrate must be in plane and free from obstructions.
- .3 Do not begin installation until unacceptable conditions have been corrected.

### **3.3 FABRICATION**

- .1 Use competent mechanics and work accurately to details indicated and as specified herein.
- .2 Verify all dimensions on site prior to fabrication.
- .3 Fabricate sheet metal flashings to the size and shape indicated for drip flashings; termination flashings, starter strips and all other flashings, closures and trim as required according to site measurements.
- .4 Fabricate drip and sill flashings to provide a minimum 2% slope outward. End joints of adjacent lengths of metal flashing shall be made using an "S-lock" joint.
- .5 All edges to be hemmed a minimum 0.5" (13mm) for appearance and stiffness.
- .6 Incorporate for concealed anchorage of flashing and means for adjustment of level during installation.
- .7 End joints where adjacent lengths of metal flashing meet shall be made in accordance with jointing method specified hereinafter.
- .8 Form to profile, free of oil canning with 8' (2.4m) maximum lengths.
- .9 Damaged or bent sheets shall be rejected.

### **3.4 SELF ADHERING MEMBRANES PREPARATION**

- .1 Remove loose or foreign matter which might impair adhesion of materials.
- .2 Ensure all substrates are clean of oil or excess dust; all masonry joints struck flush, open joints are filled; and all concrete surfaces are free of large voids, spalled areas or sharp protrusions.
- .3 Ensure all substrates are free of surface moisture prior to application of primers and membranes.
- .4 Ensure metal closures are free of sharp edges and burrs.
- .5 Seal all voids of wall to roof transitions.

### **3.5 SELF ADHERING MEMBRANE INSTALLATION**

- .1 Install materials in accordance with manufacturer's instructions supplemented as follows.
- .2 Apply primer to prepared and approved substrate and allow minimum of 30 minutes open time. Only apply primer in area that can be completed within the allowable time as specified by manufacturer. Primed surface does not covered during the same working day must be re-primed.
- .3 Install all transition membrane prior to application of primary membrane. Install transition membrane at, but not limited to, the following locations:
  - .1 window and door frames;
  - .2 terminations at roofing systems,
  - .3 at drip flashings, and
  - .4 as shown in details

- .4 Moisture barrier membrane is to lap over self-adhering membrane in a fashion to provide positive water drainage.
- .5 Apply primers and membranes within recommended application temperature ranges. Consult manufacturer when materials cannot be applied within these temperature ranges.

### **3.6 INSTALLATION**

- .1 Install products in strict accordance with the manufacturer's written instructions and details.
- .2 Ensure all surfaces are free of dust, grease, oil, loose or spalled material.
- .3 Install specified membranes and flashing membrane to general wall surface in accordance to manufacturers written instructions. All surfaces to receive membrane to be primed using primer recommended by manufacturer. All side laps to be 50 mm; end laps 100 mm. Where applicable membrane to tie into roof perimeter membrane flashings and base roof membrane flashings.
- .4 Install preformed metal cladding system in accordance with manufacturer's written instructions.
- .5 Fasten cladding supports and clips to masonry with specified fasteners. Spacing of fasteners to be as per Drawings. Securely install components plumb and square, in true straight, flat or flush planes, free from distortion and to the satisfaction of the Consultant. Shim framing components as required to compensate for unevenness of existing substrate.
- .6 Fasten metal siding and flashings to Z-bar supports with specified fasteners. Drip flashings to provide a minimum 2% slope outwards. Spacing of Z-bar supports and fasteners to be as per Drawings.
- .7 Provide notched and formed closures, sealed against weather penetration as per the details.
- .8 Exposed or face fastening will not be permitted except as shown on approved Shop Drawings. Lock end joints and sealed to provide weather-tight seal.
- .9 Provide metal sill, window/door opening flashings, starter strips, inside corners, edgings, drips, and caps in accordance with manufacturers requirements.
- .10 Seal junctions between dissimilar materials with sealant. Complete work in accordance with Section 07 92 00 – Joint Sealing.

### **3.7 CLEAN-UP**

- .1 Daily as the work proceeds and on completion, remove all surplus materials and debris resulting from the foregoing work.
- .2 Remove all stains, caulking or other adhesive from all affected surfaces.
- .3 Upon completion of siding installation clean all areas and ensure that the site is free of all scrap, packaging, and unused building materials.

**END OF SECTION - 07 46 19**

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

- .1 Installation of a new roof system over prepared substrate.
- .2 Existing roofing components and related appurtenances to be removed as specified in preparation for installation of a new low slope, conventional roofing system, including but not limited to:
  - .1 On Roof Areas 1.1, 2.1 and 2.2:
    - .1 Existing metal roof deck,
    - .2 13mm (0.5") siliconized gypsum roof board, in roofing adhesives,
    - .3 New 1-ply modified bitumen vapour barrier field membrane and flashing, self-adhered,
    - .4 51mm (2.0") polyisocyanurate insulation, in adhesive,
    - .5 76mm (3.0") polyisocyanurate insulation, in adhesive,
    - .6 7mm (9/32" 2-1 Soprasmart Board with factory laminated base sheet in adhesive
      - 1. OR 14.9mm 2-1 HS ISO board with laminated base sheet, in roofing adhesives
      - 2. OR 0.5" Gypsum Cover Board and 1 ply base sheet field membrane self-adhered,
    - .7 1 ply modified bitumen base sheet flashings, self-adhered,
    - .8 1 ply granular modified bitumen cap sheet field membrane, torch applied,
    - .9 1 ply granular modified bitumen cap sheet flashings, torch applied,
    - .10 Prefinished metal flashings and trim.

### 1.2 RELATED SECTIONS

- .1 Section 01 11 00 – Summary of Work
- .2 Section 02 41 19 – Selective Demolition & Removal
- .3 Section 07 62 00 – Sheet Metal Flashing & Trim
- .4 Section 07 92 00 – Joint Sealants

### 1.3 REFERENCES

- .1 Latest edition of all listed references; most stringent requirements to govern in conflicts:
  - .1 American Society for Testing and Materials (ASTM) International:
    - .1 C208: Cellulosic Fibre, Insulating Board.
    - .2 C578: Rigid, Cellular Polystyrene Thermal Insulation.
    - .3 C1289: Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
    - .4 D41: Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
    - .5 D312: Asphalt Used in Roofing.
    - .6 D2822: Asphalt Roof Cement.
    - .7 D4601: Standard for Asphalt Coated Glass Fibre Base Sheet Used in Roofing.
    - .8 D6162: SBS Mod. Bit. Sheets Using Polyester & Glass Fibre Reinforcements.
    - .9 D6163: SBS Mod. Bit. Sheets Using Glass Fibre Reinforcements.
    - .10 D6164: SBS Mod. Bit. Sheets Using Polyester Reinforcements.
  - .2 Canadian Standards Association (CAN/CSA):

- .1 A123.2: Asphalt Coated Roofing Sheets.
  - .2 A123.16: Asphalt Coated Glass Base Sheets.
  - .3 A123.21: Dynamic Wind Uplift Resistance of Roof Assemblies.
  - .4 A231.1: Precast Concrete Paving Slabs.
  - .5 O121M: Douglas Fir Plywood.
  - .6 O151M: Canadian Softwood Plywood.
- .3 Canadian General Standards Board (CAN/CGSB):
- .1 37.29M: Rubber-Asphalt Sealing Compound
  - .2 37-GP-9M: Primer, Asphalt, unfilled, for Asphalt Roofing and Waterproofing.
  - .3 37-GP-15M: Application of Asphalt Primer for Asphalt Roofing & Waterproofing.
  - .4 37-GP-56M: Membrane, Bituminous, Prefabricated and Reinforced for Roofing.
  - .5 51.26M: Thermal Insulation, Urethane and Isocyanurate, Boards, Faced.
  - .6 51.33M: Vapour Barrier Sheet, Excluding Polyethylene, for use in Construction.
- .4 Underwriters Laboratories of Canada (CAN/ULC):
- .1 S701: Thermal Insulation, Polystyrene, Boards and Pipe Covering.
  - .2 S704: Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Fixed.
- .5 Roofing Contractors Association of Nova Scotia/Canada Roofing Contractors Association (CRCA): Roofing and Waterproofing Manual.

#### 1.4 DESIGN REQUIREMENTS

- .1 Design Wind Load: Install new roof systems to manufacturer's tested and approved roof system assemblies and meet or exceed design wind uplift resistance criteria of CSA A123.21. Wind uplift analysis performed for building using NRCC's wind load calculator for roof coverings with resulting parameters listed below.
- .1 Wind Uplift Pressure to Meet:
    - .1 Roof Area 1.1, 2.2 and 2.3:
      - .1 Corner & Edge Zone Width (z): 8.6ft
      - .2 Corner of Roof (c): -82 psf.
      - .3 Edge of Roof (s): -42 psf.
      - .4 Field of Roof (r): -33 psf.
  - .2 Confirm calculation and interpretation of wind parameters with chosen primary membrane manufacturer and submit manufacturer's System Letter noting compliance.
- .2 Shop Drawings: Provide mechanical and adhesive fastening patterns where required by specifications for compliance from chosen manufacturer's roof system testing for wind uplift and installation requirements to achieve specified warranty.

#### 1.5 SUBMITTALS BY ROOFING CONTRACTOR

- .1 Certificate of Insurance for ten million (\$10,000,000<sup>00</sup>) in Liability,
  - .2 WCB Experience Rating & Clearance Letter,
  - .3 Sample copy of Manufacturer's Labour, Material, and Workmanship Warranty,
  - .4 Sample copy of Contractor's Warranty.
- .2 Provide to Quality Observer, within five (5) working days after Notice of Award:

- .1 Initial project work schedule showing anticipated progress stages and final completion of work from Start Date. Do not commence Work before project schedule has been provided and reviewed.
  - .2 Provincial Ministry's Notice of Project form or equivalent for Place of Work, notarized and executed.
  - .3 Current WCB Experience Rating & Clearance Letter for Place of Work.
  - .4 Specified Bonding and Insurance in Owner's name.
- .3 Provide to Quality Observer, at Prestart Meeting:
- .1 Finalized project work schedule listing start date, anticipated number of working days working, and manpower assignments for project.
  - .2 Sample of specified warranties from Manufacturer and Contractor for proposed materials and products to be installed.
  - .3 Letter and completed Manufacturer's project warranty application form sent to "Warranty Provider" advising them of project start and particulars.
  - .4 Complete Materials List; including installation instructions and product datasheets providing characteristics of all proposed materials to be installed.
  - .5 Safety Data Sheets (SDS) pertaining to all proposed materials to be used on site to perform Work.
  - .6 Certifications by manufacturers of roofing and insulating materials that all products supplied comply with all requirements of current identified ASTM and other industry standards or practices.
  - .7 Letter by Contractor certifying that all specified roof system components are compatible, are approved by Manufacturer, meet specified warranty terms, and are compatible with existing substrates.
  - .8 Applicable shop drawings for tapered insulation layout and other specified items to be reviewed by Consultant prior to prefabrication and delivery.
  - .9 Attachment pattern diagrams to meet wind uplift requirements for mechanical fastening and adhesive securement of deck boards, insulation boards, and cover boards where applicable to project.
  - .10 List of "Trained and Carded Membrane Approved Applicators" to work and be present during performance of Work.
  - .11 Health & Safety Plan for Specific Work Site including contact list and phone numbers for project, and twenty-four (24) hour emergency contact numbers.
- .4 Provide to Owner, at project completion:
- .1 Completed and executed Roof System Warranty for project areas,
  - .2 Completed and executed Contractor's Warranty for project areas.
  - .3 for suitability to perform specified Work to be made within three (3) working days.

## 1.6 QUALITY ASSURANCE

- .1 Compatibility between components of roofing system and wall system is essential. Provide written declaration to Consultant stating that materials and components, as assembled in new system will meet this requirement.
- .2 Perform Work in accordance with Contracts Documents and Manufacturer's written instructions.
- .3 Make no deviation from Project Specifications or approved shop drawings without prior written approval by Consultant and, if applicable, Manufacturer.
- .4 Arrange for a Technical Representative of Manufacturer to review installed roof system wherever a System Warranty requirement has been specified.
- .5 Upon completion of new installation, provide certification that all work has been done in accordance with Contract Documents and to Manufacturer's requirements.

## 1.7 QUALITY OBSERVATION

- .1 Rimkus Consulting Group Canada Inc., hereafter known as "Observer", is an independent Rooftop Quality Observation Agency appointed by Owner to observe performance of roof Work:
  - .1 Roofing Contractor to Arrange Prestart site meeting with Observer no more than three (3) weeks prior to commencement of Work on site. Obtain Observer's instructions and reference procedures to be followed on project.
  - .2 Provide to Observer date when each phase of work will begin, at least forty-eight (48) hours prior to commencement of Work for phase.
  - .3 Arrange Final Observation and examination of installed roof with both Observer and Manufacturer's Technical Representative.
- .2 Cooperate with Observer and afford all facilities necessary to permit full Rooftop Quality Observations during performance of Work. Act immediately on instructions given by Observer.
- .3 When required, provide roof cut-outs and samples in field where directed by Observer and make good without additional cost to Owner.
- .4 When initial tests and observations reveal work failing to meet contract requirements, pay for any additional testing and observations required by Observer or third party testing agency for correction of Work, without additional cost to Owner.
- .5 Copies of Observation Reports issued to Owner and Prime Contractor.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- .1 Site storage is limited. Where applicable, location of storage and related facilities to be coordinated with Prime Contractor and Owner.
- .2 All materials to be delivered and stored in their original packaging bearing manufacturers label, grade and product weight, including all other related standards, specifications, and like.
- .3 All materials to be adequately protected from inclement weather conditions and stored in a dry, well ventilated and weather protected location. Use only dry materials and apply only during weather that will not introduce moisture into roofing system.
- .4 Only materials to be installed on same day to be removed from protected location to work site.



- .5 During extreme temperature, materials to be stored in a heated location with a 4.4C (40°F) minimum temperature and removed only as needed.
- .6 Modified bitumen rolls to be kept clear of all flames and sparks when not being applied to roof.
- .7 All materials in a rolled configuration to be stored on end, elevated off ground, and on a pallet or skid to protect bottom surface from foreign debris and moisture.
- .8 Restrict stockpiling of material in one location on roof to prevent exceeding specified deck live load capacity. Avoid point loading that may compromise structural integrity of roof.
- .9 Handle and store products in a manner to prevent damage and deterioration.
- .10 Remove and replace damaged products at own expense and to satisfaction of Consultant.

### **1.9 ENVIRONMENTAL REQUIREMENTS**

- .1 Do not apply roofing materials to damp, wet, or frozen deck or substrates.
- .2 Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.
- .3 Only install as much new roofing as can be made weather-tight each day, including all flashing and detail work. All seams to be sealed or heat welded before leaving job site that work day.
- .4 All work to be scheduled and executed without exposing interior building areas to effects of inclement weather. Existing building and its contents to be protected against all risks.
- .5 All new and temporary construction, including equipment and accessories, to be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- .6 Uninterrupted water-stops to be installed at end of each day's work and to be completely removed before proceeding with next day's work. Water-stops to not emit dangerous or unsafe fumes and to not remain in contact with finished roof as installation progresses. Contaminated membrane to be replaced at no cost to Owner.
- .7 Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, provide all necessary protection and barriers to segregate work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over felt or plywood over insulation board to be provided for all new and existing roof areas that receive rooftop traffic during construction.
- .8 Prior to and during application, all dirt, debris and dust to be removed from surfaces by vacuuming, sweeping, blowing with compressed air, and/or similar methods.
- .9 Follow all safety regulations as required by OHS (Occupational Health and Safety) and any other applicable authority having jurisdiction.
- .10 All roofing, insulation, flashings and metal work removed during construction to be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable Local, Provincial, and National requirements.
- .11 All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) to be immediately removed from site by Contractor and properly transported to a legal dumping area authorized to receive such material.
- .12 Take precautions that storage and/or application of materials and/or equipment does not overload roof deck or building structure.

- .13 Flammable adhesives and deck primers to not be stored and not be used in vicinity of open flames, sparks and excessive heat.
- .14 All rooftop contamination that is anticipated or that is occurring to be reported to manufacturer to determine corrective steps to be taken.
- .15 Verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Contractor to report any such blockages in writing to Consultant for corrective action prior to installation of roof system.
- .16 Immediately stop work if any unusual or concealed condition is discovered and immediately notify Consultant of such condition in writing in order to obtain additional instruction.
- .17 Site cleanup, including both interior and exterior building areas that have been affected by construction, to be completed to satisfaction of Consultant.
- .18 All landscaped areas damaged by construction activities to be repaired at no cost to Owner.

#### **1.10 PREPARATORY WORK**

- .1 Review roof levels and advise Consultant of any deviation from specified tolerances.
- .2 Review roof drain locations and number. Advise Consultant of any deviation or alteration from specifications.
- .3 Sweep roof deck free of dust or dirt and remove all debris prior to any installation work.

#### **1.11 SAFETY AND PROTECTION**

- .1 Solvents, Adhesives and Membranes:
  - .1 Store only enough solvents and adhesives on roof for same day use. Do not leave adhesives on roof over night. Manufacturer supplied adhesives should be stored in their overnight containers. Minimum temperature for solvent based adhesives and primers is -5°C (23°F). Refer to Manufacturer's written instructions.
  - .2 Do not install roof membrane when temperature remains below 5°C (41°F) for self-adhered installations. Apply materials in accordance with manufacturer's recommendations and in accordance with Canadian Modified Bitumen Manufacturer's Association.
  - .3 Protect walls from damage where hoisting is required.
  - .4 Protect roofs from damage due to traffic and materials handling until completion.
- .2 Fire Safety:
  - .1 Keep charged and ready to use fire extinguishers on site at all times, including at access to building interior, at rooftop work areas, and wherever solvent based products are stored and accessed.
  - .2 Provide a minimum two (2) hour fire watch at completion of each day's activities on all projects implementing use of propane torches and/or burners.
    - .1 A handheld, infrared thermal scanner suitable for roofing applications and fire alert must be kept on site at all times during torching procedures. Fire scanner by Raytek or approved Rimkus equal. Check seams and flashings at hourly intervals for flare ups.

.3 Health and Safety:

Contractor to comply with all safety requirements as per current printed edition of Provincial Occupational Health and Safety Act and with Roofing Contractors Association of Nova Scotia

### 1.12 WARRANTY

.1 Contractor Workmanship Warranty:

.1 On Roof Area 1.1, 2.1 and 2.2: Provide Owner with Contractor's Warranty for Workmanship on a Roofing Contractors Association of Nova Scotia (RCANS) approved form, signed, authorized, and executed. Warranty period to be for minimum two (2) years from date of Substantial Completion.

.1 During Contractor's warranty term, any work related to roofing, flashing, or metal found to be defective or otherwise not in accordance with Contract Documents, to be promptly repaired by Contractor at no additional cost to Owner and in accordance with drawings and specifications. Applicator's warranty obligation to run directly to Owner with a copy sent to Manufacturer.

.2 Roof System Warranty:

.1 On Roof Area 1.1, 2.1 and 2.2: Provide Owner with Manufacturer's Labour, Material and Workmanship N.D.L. (No Dollar Limit) System Warranty for a period of twenty (20) years on roof replacement areas.

.1 Owner to notify both membrane Manufacturer and Contractor of any leak that occurs during time period while warranties remain in effect.

.3 Cost of all warranties to be included in Contract Amount.

## PART 2 - PRODUCTS

### 2.1 GENERAL

- .1 All membrane materials are to be supplied by Johns Manville, Siplast, or Soprema, meeting manufacturer's respective material compatibility requirements to achieve required System Warranty.
- .2 Components to be used that are other than those supplied or manufactured by membrane manufacturer may be submitted for review and acceptance by membrane manufacturer.
- .3 Membrane Manufacturer's acceptance of any other product is only for a determination of compatibility with products and not for inclusion in manufacturer's warranty.
- .4 Specifications, installation instructions, limitations, and/or restrictions of respective manufacturers must be reviewed by Consultant for acceptability for intended use with membrane manufacturer's products.

### 2.2 MEMBRANE PRIMER

.1 General Purpose: Asphalt Primer to ASTM D41 Type II.

.1 Solvent Based Primer: Composed of volatile solvents, synthetic polymers, and/or adhesive enhancing resins to prepare surfaces for membrane application.

- .1 JM Asphalt Primer (Black) by Johns Manville,
- .2 PA-917 Asphalt Primer by Siplast,
- .3 Elastocol 500 Primer (Black) by Soprema.

- .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .2 High-tack for Self-adhered Membranes:
  - .1 Solvent Based Primer: Composed of volatile solvents, synthetic polymers, and/or adhesive enhancing resins to prepare surfaces for self-adhered membranes.
    - .1 JM SA Primer (Red) by Johns Manville,
    - .2 TA-325 Primer (Orange) by Siplast,
    - .3 Elastocol Stick Primer (Red) by Soprema.
    - .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
  - .3 For Torch Applied Membranes:
    - .1 Solvent Based Primer: Composed of SBS modified bitumen, volatile solvents, synthetic polymers, and/or adhesive enhancing resins to prepare surfaces for torch applied membranes.
      - .1 JM Asphalt Primer (Black) by Johns Manville,
      - .2 PA-917 Asphalt Primer by Siplast,
      - .3 Elastocol 500 Primer (Black) by Soprema.
      - .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

### 2.3 ROOFING BOARD ADHESIVE

- .1 Polyurethane Adhesive for Insulation, and Cover Boards:
  - .1 Ribbons of one or two component polyurethane foamable adhesive.
    - .1 INSTA-STIK Adhesive by Flexible Products Company-Roofing Group (DOW),
    - .2 JM Two-Part Urethane Insulation Adhesive by Johns Manville,
    - .3 OlyBond500 Adhesive by OMG Roofing Products,
    - .4 Para-Stik Adhesive by Siplast,
    - .5 Duotack by Soprema.
    - .6 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

### 2.4 DECK BOARD: GYPSUM ROOF BOARD

- .1 Deck Board: Dimensionally stable, fire resistant, gypsum based roof board with treated core for moisture and mould resistance; size no larger than 1.2m x 2.4m (4'x8').
  - .1 Glass-Mat Faced: Siliconized gypsum roof board with factory laminated glass-mat facer meeting ASTM C 1177. Boards with factory applied primer preferred.
    - .1 13mm (1/2") DensDeck Prime with EONIC technology by Georgia-Pacific,
    - .2 13mm (1/2") DEXcell FA Glass Mat Roof Board by National Gypsum (JM).
  - .2 OR Unfaced, Fibre Reinforced: Gypsum roof board with homogenous composition reinforced with cellulose fibres meeting ASTM C 1278.
    - .1 13mm (1/2") CGC Securock Gypsum-Fibre Roof Board by CGC Inc.,
    - .2 13mm (1/2") Securock Gypsum-Fibre Roof Board by USG.
    - .3 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

## 2.5 VAPOUR RETARDER: 1 PLY SELF-ADHERED MODIFIED BITUMEN

### .1 Vapour Retarder Field Membrane:

- .1 Self-adhered grade modified bitumen, minimum 1.5mm (60 mil) thick, with minimum 85g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface lightly sanded and self-adhesive bitumen bottom surface covered with polyolefin or silicone release film.
  - .1 DynaGrip SD/SA by Johns Manville,
  - .2 Paradiene 20 SA by Siplast,
  - .3 Sopraflash Stick Duo by Soprema (Application ≥ 0°C),
  - .4 SBS Glass SA Base by Tradesman.
  - .5 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

### .2 Vapour Retarder and Tie-in Flashings:

- .1 Self-adhered grade modified bitumen, minimum 1.5mm (60 mil) thick, with minimum 85g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat, or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface lightly sanded and self-adhesive bitumen bottom surface covered with polyolefin or silicone release film.
  - .1 DynaGrip SD/SA by Johns Manville,
  - .2 Paradiene 20 SA by Siplast,
  - .3 Sopraflash Stick Duo by Soprema (Application ≥ 0°C),
  - .4 SBS Glass SA Base by Tradesman.
  - .5 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

## 2.6 BASE INSULATION: CGF POLYISOCYANURATE

- .1 Base Insulation Type: Closed-cell polyisocyanurate foam rigid insulation boards to ASTM C1289 Type II, Class 1, 2, or 3, Grade 2, manufactured with HCFC-free blowing agent (Pentane) bonded to inorganic coated glass facers on top and bottom surfaces during manufacturing process:
  - .1 Approved and listed for use with Noncombustible and FM Class 1 rated insulated roof assemblies to FM Standard 4450 on Insulated Steel Deck Roofs and FM Standard 4470 on Roof Covers for durability, wind uplift, and fire resistance.
  - .2 Meet physical property requirements of ASTM C1289 and CAN/ULC S704.
  - .3 Compressive strength: Min. 138 kPa (20 psi) to ASTM C1621, Grade 2.
  - .4 Dimensional stability change of less than 2% conforming to ASTM D2126.
  - .5 Conformity to CAN/ULC S704 and Can/ULC S770 for Long Term Thermal Resistance (LTTR) in polyisocyanurate insulation.

- .6 Acceptable Products:
  - .1 ACFoam III polyisocyanurate by Atlas Roofing Corp.,
  - .2 Engry 3 CGF polyisocyanurate by Johns Manville,
  - .3 Paratherm CG polyisocyanurate by Siplast,
  - .4 Sopra-ISO Plus polyisocyanurate by Soprema.
  - .5 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .1 Base Insulation Thickness:
  - .1 On Roof Area 1.1: Continuous flat layer of polyisocyanurate insulation boards 76mm (2.0") in thickness, with butt lapped joints.
  - .2 Base Insulation Panel Size: Maximum 1.22m x 1.22m (4' x 4') regardless of attachment method.
- .2 Tapered Drainage Sumps: Tapered closed-cell polyisocyanurate foam rigid insulation boards with inorganic coated glass facers.
  - .1 At Roof Drains: Delete section of base insulation to accommodate tapered sump:
    - .1 On Roof Areas 1.1: 2.44m x 2.44m (8' x 8') and tapered from 51mm (2.0") at outer edge down 2% to 32mm (1.25") in thickness at center..

## 2.7 OVERLAY INSULATION: CGF POLYISOCYANURATE

- .1 Overlay Insulation Type: Closed-cell polyisocyanurate foam rigid insulation boards to ASTM C1289 Type II, Class 1, 2, or 3, Grade 2, manufactured with HCFC-free blowing agent (Pentane) bonded to inorganic coated glass facers on top and bottom surfaces during manufacturing process:
  - .1 Approved and listed for use with Noncombustible and FM Class 1 rated insulated roof assemblies to FM Standard 4450 on Insulated Steel Deck Roofs and FM Standard 4470 on Roof Covers for durability, wind uplift, and fire resistance.
  - .2 Meet physical property requirements of ASTM C 289 and CAN/ULC S704.
  - .3 Compressive strength: Min. 138 kPa (20 psi) to ASTM C1621, Grade 2.
  - .4 Dimensional stability change of less than 2% conforming to ASTM D2126.
  - .5 Conformity to CAN/ULC S704 and Can/ULC S770 for Long Term Thermal Resistance (LTTR) in polyisocyanurate insulation.
  - .6 Acceptable Products:
    - .1 Sopra-ISO Plus polyisocyanurate by Soprema.
    - .2 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .1 Overlay Insulation Thickness:
  - .1 On Roof Area 1.1: Continuous flat layer of polyisocyanurate insulation boards 51mm (3.0") in thickness, with butt lapped joints.
- .2 Overlay Insulation Panel Size:
  - .1 Flat Panels: Maximum 1.22m x 1.22m (4' x 4') when adhered to substrate.

- .3 Tapered Insulation Supply and Insulation Crickets:
  - .1 Install tapered insulation crickets as shown on roof plan, sloped 1% down to min thickness of 0mm, unless otherwise stated.
  - .2 All tapered insulation panels, drain sumps, and crickets to be factory cut and mitred to suit layout. Individual panels to be clearly labeled for easy identification and assembly.
  - .3 Submit shop drawings to Consultant for review prior to prefabrication and shipping.

## 2.8 COVER BOARD:

- .1 Base Sheet Laminated Asphaltic Board:
  - .1 4.8mm (3/16") thick multi-ply, semi-rigid asphaltic roofing recovery board composed of a mineral fortified asphaltic core formed between two asphaltic saturated fibreglass liners with 2.2mm (3/32") factory laminated non-woven polyester reinforced SBS modified bitumen base sheet membrane conforming to CSA A123.23-15. Panel boards to have a membrane duo selvedge edge width of 89mm (3.5") for overlapping onto next board.
    - .1 7.0mm (9/32") 2-1 Soprasmart Board by Soprema.
    - .2 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
  - .2 Laminated Asphaltic Board Size: Flat panels, max. size 0.91m x 2.44m (3' x 8').
  - .3 Laminated Asphaltic Board Surface: Thermofusible polyolefin film top surface.
  - .4 Cover Strips For Base Sheet Laminated Panels: At insulation panel end joints, 330mm (13.0") wide strips of 2.5mm (3/32") thick base sheet membrane with composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15.
    - .1 Heat Welded Application: Top and bottom surface covered with thermofusible polyfilm; SopraLap SP by Soprema.
- .2 OR Asphaltic Cover Board (For use at Corners of Roof System): Dimensionally stable, laminated board, max size 1.2m x 2.4m (4'x8'):
  - .1 Multi-ply, semi-rigid asphaltic roofing recovery board composed of a mineral fortified asphaltic core formed between two asphaltic saturated fibreglass liners.
    - .1 4.8mm (3/16") Sopraboard by Soprema.
    - .2 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .3 OR Base Sheet Laminated HD Polyiso Board:
  - .1 12.7mm (0.5") thick, high density polyisocyanurate insulation board with coated glass facers, minimum compressive strength of 689 kPa (90 psi), and factory laminated 2.2mm (3/32") thick, non-woven polyester reinforced SBS modified bitumen base sheet conforming to CSA A123.23-15 on top side. Panel board membrane to have duo selvedge edge width of 90mm (3.5") for overlapping onto next board.
    - .1 14.9mm (19/32") 2-1 Soprasmart ISO HD by Soprema.
    - .2 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

- .4 OR Gypsum Cover Board: Dimensionally stable, fire resistant, gypsum based roof board with treated core for moisture and mould resistance; size no larger than 1.22m x 2.44m (4' x 8'):
  - .1 Glass-Mat Faced: Siliconized gypsum roof board with factory laminated glass-mat facer meeting ASTM C 1177. Boards with factory applied primer preferred.
    - .1 13mm (1/2") DensDeck Prime with EONIC technology by Georgia-Pacific,
    - .2 13mm (1/2") DEXcell FA Glass Mat Roof Board by National Gypsum (JM)
    - .3 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

## 2.9 MODIFIED BITUMEN MEMBRANE: SELF-ADHERED BASE & TORCH CAP

- .1 Two (2) ply modified bitumen membrane system for specified System Warranty.
- .2 Base Sheet Field Membrane:
  - .1 Soprema Option: Factory laminated to cover board.
  - .2 Self-adhered grade modified bitumen; minimum 2.5mm thick, with minimum 180 g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface lightly sanded or covered with thermofusible polyolefin film and self-adhesive bitumen bottom surface covered with polyolefin or silicone release film.
    - .1 For Twenty (20) Year System Warranty (BASE BID):
      - .1 DynaGrip P/SA by Johns Manville,
      - .2 Paradiene 20 SA by Siplast,
      - .3 Sopraply Flam Stick by Soprema (Use Winter Grade at -10 to 10°C).
      - .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .3 Base Sheet Flashing:
  - .1 Self-adhered grade modified bitumen; minimum 2.5mm with minimum 180 g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat, or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface lightly sanded or covered with thermofusible polyolefin film and self-adhesive bitumen bottom surface covered with polyolefin or silicone release film.
    - .1 For Twenty (20) Year System Warranty (BASE BID):
      - .1 DynaGrip P/SA by Johns Manville,
      - .2 Paradiene 20 SA by Siplast,
      - .3 Sopraply Flam Stick by Soprema (Use Winter Grade at -10 to 10°C).
      - .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)
- .4 Cap Sheet Field Membrane:
  - .1 Torch grade modified bitumen; minimum thickness 3.3mm, with minimum 250 g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat, or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface to have No. 11 ceramic granules and torch grade bitumen bottom surface



covered with thermofusible polyolefin film or lightly sanded. Colour of granules to be chosen by Owner from Contractor supplied samples of standard colours.

.1 For Twenty (20) Year System Warranty (BASE BID):

- .1 DynaWeld 250 Cap by Johns Manville,
- .2 Paradiene 30 TG by Siplast,
- .3 Sopraply Traffic Cap by Soprema.
- .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

.5 Cap Sheet Flashing:

- .1 Torch grade modified bitumen; minimum thickness 3.3mm, with minimum 250 g/m<sup>2</sup> non-woven polyester scrim, random glass fibre mat, or composite reinforcement, impregnated and coated with SBS modified bitumen, and conforming to CSA A123.23-15. Top surface to have No. 11 ceramic granules and torch grade bitumen bottom surface covered with thermofusible polyolefin film or lightly sanded. Colour of granules to be chosen by Owner from Contractor supplied samples of standard colours.

.1 For Twenty (20) Year System Warranty (BASE BID):

- .1 DynaWeld 250 Cap by Johns Manville,
- .2 Parafor 30 TG by Siplast,
- .3 Sopraply Traffic Cap by Soprema.
- .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

## 2.10 MISCELLANEOUS INSULATION

- .1 Batt Insulation: Non-combustible, water resistant, vapour permeable, semi rigid mineral wool batt insulation made from slag and basalt rock, conforming to CAN/ULC S702-09 with a density of 45 kg/m<sup>3</sup> (2.8 lb/ft<sup>3</sup>).

- .1 Rockwool AFB (Acoustical Fire Batt) by Rockwool Inc.
- .2 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

- .2 Extruded Polystyrene Insulation: Closed cell, Type IV (4) extruded expanded polystyrene foam insulation boards with continuous skin surface on top face and back meeting requirements of CAN/ULC S701. Minimum thickness 25mm (1.0").

- .1 Foamular 350 or 400 series XPS by Owens Corning (Light Pink),
- .2 Styrofoam Brand Roofmate XPS insulation by Dow (Light Cyan),
- .3 Sopra-XPS 35 insulation by Soprema (Light Orange).
- .4 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

## 2.11 FASTENERS, PLATES & FASTENING BARS

- .1 All fasteners and plates to meet requirements of Factory Mutual Global 4470 Standard for wind uplift and corrosion resistance in roofing.

- .2 Wood to steel, wood to wood or steel to steel:

- .1 Tru-Fast Ultra Solid Stainless Steel fastener or equal approved by membrane Manufacturer, to penetrate substrate by minimum 19mm (3/4").

- .3 Wood/steel to concrete or concrete block:

- .1 Perma-Grip Tap Grip HD Truss Head fastener with Perma-Coat Z3 corrosion protection or equal approved by membrane Manufacturer, to penetrate substrate by 32mm (1 1/4").
- .2 Tru-Fast Tap Grip HD Truss Head fastener with Perma-Coat Z3 corrosion protection to penetrate substrate by 32mm (1 1/4").
- .4 Steel/aluminum to aluminum:
  - .1 Tru-Fast DP with Trucote PC-3 corrosion protection fastener c/w EPDM galvanized steel sealing washers or equal approved by membrane Manufacturer, to penetrate substrate by 19mm (3/4").
- .5 Termination bar for membrane:
  - .1 Extruded aluminum, 1.5mm (0.060") thick x 25mm (1") wide x 3.05m (10') long with 6mm x 9.5mm (1/4" x 3/8") slotted holes on 203mm (8") o/c. Acceptable material: TB-120 aluminum termination bar by Tru-Fast or equal approved by membrane Manufacturer.
- .6 Termination bar fastener for wood, steel or aluminum:
  - .1 Tru-Fast Ultra Solid Stainless Steel fastener to penetrate substrate by 19mm (3/4") c/w EPDM galvanized steel sealing washers or Construction Fasteners Inc. Woodgrip #14 screw complete with Senti coating on threads, Chromagard colour match head and EPDM washer, or equal approved by membrane Manufacturer,
- .7 Termination bar fastener for concrete or masonry:
  - .1 Tru-Fast Tap Grip Truss Head fastener with Perma-Coat Z3 corrosion protection or equal approved by membrane Manufacturer, to penetrate substrate by 32mm (1 1/4") c/w EPDM galvanized steel sealing washers.
- .8 Pre-painted metal flashing to steel or wood:
  - .1 #14 Colormate fasteners by Leland Industries, Construction Fasteners Inc. Woodgrip #14 screw complete with Senti coating on threads and Chromagard colour match heads with EPDM washer, or equal approved by membrane Manufacturer, to penetrate substrate by minimum 19mm (3/4").
- .9 Membrane to wood:
  - .1 Galvanized round top roofing nails with minimum 25mm (1") diameter heads or plate and head combination, to penetrate substrate a minimum 32mm (1 1/4").

## 2.12 ROOFING ACCESSORIES

- .1 Roofing accessories to be manufactured from spun aluminum or copper as required, and complete with removable caps where applicable. Unless otherwise designated by Consultant, pitch pockets are strictly prohibited. All units are to have foamed in place closed cell urethane foam insulation sprayed into unit at plant under controlled conditions. Flanges to be primed with rubberized asphalt compatible primer. Supply roof drains with control flow weirs and install weirs only at existing roof drains currently using control flow.
  - .1 Retrofit Roof Drain Insert: RD-4C-RR-FLAT by Thaler with T-7 Control Flow Weirs,
  - .2 Plumbing Stack Flashing: SJ-26A insulated stack by Thaler Metal Industries Inc.,
  - .3 Tallcone/B-Vent Flashing: MEF-4A by Thaler Metal Industries Inc.,
  - .4 Hot Pipe Flashing: MEF-3A by Thaler Metal Industries Inc.,
  - Walkway Pavers: Pedslab by Brooklin Concrete
  - .5 OR Rimkus Approved Equivalent (submitted for approval prior to tender closing)

- .2 Membrane Tools: Use tools, hand rollers, weighted rollers, squeegees, etc. as recommended by membrane Manufacturer for installation of their product to ensure compatibility and avoid damaging of pressure sensitive membranes.
- .3 Retro Roof Drains: Copper retrofit drain inserts using U-Flow connectors. Retrofit roof drains shall be RD-4C-RR-FLAT by Thaler Metal Industries, complete with cast aluminum domes and U-Flow seal connectors.
- .4 Pourable Sealer: Elastomeric pourable sealer as recommended by manufacturer.
- .5 Sealing Compound: Rubberized Sealing Compound to CAN/CGSB-37.29, rubber asphalt type Sopramastic by Soprema, MBR Utility Cement by Johns Manville, or PS-209 Elastomeric Sealant by Siplast.
- .6 Spray Urethane foam: One or two component polyurethane spray foam insulation. Use low pressure expanding spray foam insulation at force sensitive areas.
- .7 Fire Rated Spray Foam: Two component, fire rated (2 Hour) polyurethane spray foam insulation; Fire Barrier FIP-1Step by 3M.
- .8 Firestop Sealant: One component, neutral cure silicone sealant meeting ASTM E84 and CAN4-S115M, designed for firestop applications at joints and through-wall penetrations; TREMstop Fyre-Sil silicone sealant (red) by Tremco or Rimkus approved equal.
- .9 Sheet Metal Flashings and Trim: As per Section 07 62 00 and fabricated from 24 gauge prepainted steel. Hook strips to be 2 gauges heavier than flashings. Colour to match existing.
- .10 Sealants: As per Section 07 92 00. Colour of sealants to match component applied against.
- .11 Sacrificial Protection Membrane: Self adhered or cold applied squares of matching cap sheet membrane under all bases and footings of rooftop supports and equipment set on roof membrane. Custom cut to suit base or footing size with min. 51mm (2.0") extension on all sides.

## **PART 3 - EXECUTION**

### **3.1 WORKMANSHIP**

- .1 Perform roofing work which is not specifically covered by these Specifications in accordance with applicable industry standards and good roofing practices of:
  - .1 Canadian Roofing Contractors Association (CRCA),
  - .2 Canadian Modified Bitumen Manufacturer's Association's recommendations,
  - .3 Manufacturer's preprinted and published technical specifications,
  - .4 ULC Design No. S-107 criteria,
  - .5 Factory Mutual Global design criteria FM 1-28 and 1.49,
  - .6 Compliance with local fire insurance requirements,
  - .7 Compliance with local building codes.
- .2 Procedures for application of materials should be in accordance with Manufacturer's printed instructions and recommendations.
  - .1 Advise Consultant of adjustments to specified roofing procedures recommended by Manufacturer or due to site conditions.
  - .2 Written approval by Consultant is required to make any adjustments to specified procedures.

- .3 All work to be carried out in accordance with drawings, and specifications provided.
  - .1 All supplied drawings and details constitute acceptable installations. Any deviance from these details must first be approved by Consultant prior to installation.
- .4 While work is in progress, all steps must be taken to safeguard building from damage due to weather, fire, and structural overloading.
- .5 Examine underside of roof deck when installing mechanical fasteners, where possible, to avoid accidental damage to existing services.
- .6 Apply each part of roofing system when surfaces are free of moisture for successful application.
- .7 Do priming for asphalt roofing in accordance with CAN/CGSB 37-GP-15M and as recommended by membrane manufacturer.
  - .1 Adhesives or sealants and liquid primers will not be applied until surfaces are dry.

### 3.2 EXAMINATION OF SITE CONDITIONS

- .1 Examine existing site conditions and substrates upon which work of this section is dependent. Report to Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assumption of full responsibility for finished condition of work.
- .2 Defective work resulting from application to unsatisfactory conditions will be considered responsibility of those performing work of this section.

### 3.3 PROTECTION

- .1 Adjacent Buildings and Tenants:
  - .1 Take care to not damage any adjacent or closely located buildings and all related grounds in vicinity of Work during roofing operations.
  - .2 Protect against infiltration of dust, debris, and other such contaminants and occurrences.
  - .3 Locate garbage chutes to minimize exposure to adjacent building, its grounds, and its occupants.
  - .4 Protect walls by means of tarpaulins where garbage chutes and hoisting equipment are located and operated.
  - .5 Cover dumpsters and bins to prevent debris from blowing away.
  - .6 Do not use spray installation methods on days with significant wind.
  - .7 Damage to adjacent buildings, grounds, and vehicles to be rectified by Contractor at no additional cost.
- .2 Adjacent Roof Areas and Completed Work:
  - .1 Take care not to damage any previously performed work or existing roofs.
  - .2 If work area is accessed across existing roof areas, provide protection to existing roof system. Use continuous Protection Walkways consisting of 19mm (0.75") plywood sheathing over 38mm (1.5") extruded polystyrene insulation.
  - .3 Protect newly installed roof work from traffic and damage using Protection Walkways where warranted by traffic requirements.

- .4 Comply with any precautions deemed necessary by Consultant.
- .3 Material Storage:
  - .1 Deliver all materials to site in undamaged condition with original manufacturer's label intact and clearly visible for easy verification of specified materials.
  - .2 Provide security fencing at all times for equipment and materials stored at ground level.
  - .3 Protect rolls from flattening by storing on ends on skids.
  - .4 Whenever possible, store roof materials off roof at designated, protected storage area.
- .4 Structural Integrity of Roof:
  - .1 Use only equipment that will not adversely affect, damage, or otherwise alter roof deck.
  - .2 DO NOT STRUCTURALLY OVERLOAD ROOF DECK WITH STORAGE PILES OF STONE BALLAST AND CONCRETE PAVERS ON ROOFTOP.
  - .3 Ensure weight of paver and stone ballast is adequately distributed across roof at all times, or temporarily remove ballast from roof and store at ground level staging area.
  - .4 Immediately separate and reorganize pallets of stacked concrete pavers hoisted or carried to roof. Spread Dead Load out across roof and concentrate loading over structural members. Expect roofs to have less reserve load capacity in winter.
- .5 Inclement Weather:
  - .1 Immediately halt work during inclement weather, including but not limited to rain fall, snow, drizzle, fog, and hail. Protect exposed building substrates, open building cavities, and moisture sensitive products.
  - .2 At end of each work day or when stoppage occurs due to inclement weather, provide suitable protection from elements for completed work and materials out of storage.
  - .3 Place in to heated storage any temperature sensitive materials such as membranes, adhesives, and sealants when temperature falls below 5 °C (40 °F).
  - .4 Protect all vents, stacks, drains and related deck openings from inclement weather and contamination from debris.
- .6 Roof Safety, Access, and Egress:
  - .1 Use warning signs and barriers. Maintain in good order until completion of work.
  - .2 Access to roof to remain unobstructed.
  - .3 Keep doorways and fire routes clean and clear of any obstacles.
  - .4 Protect and safeguard all man-size or larger openings in roof deck with warning flags and suitable temporary barriers or railings.
- .7 Damage and Defective Work:
  - .1 Avoid use on roof of any petroleum based and other chemical products that are corrosive and/or damaging to membrane. Provide protection to membrane from any accidental spills or drips. Any damage to roof system caused by non-compatible products to be cut out and replaced at no cost to Owner.

- .2 Investigate and examine any damage caused by execution of Work for this contract, and repair or replace with new materials to match original finish. Restoration and repair work to be reviewed and approved by Consultant.
- .3 Defective Work resulting from application of material on unsatisfactory surface or substrate to be rectified by Contractor at no additional cost.
- .4 Defective Work resulting from improper installation of materials to be rectified by Contractor at no additional cost.

### 3.4 SURFACE PREPARATION

#### .1 Preparation:

- .1 Examine all roof decks and existing site conditions to ensure that they are in satisfactory condition for commencement of work in this section.
- .2 Divide work into logical sections and only tear-off as much existing roof as can be made watertight in same working day to prevent damage to building interior.
- .3 Prior to removal of any roof components, all existing openings (drains, vents, air intakes, etc.) to be covered or plugged to prevent any debris or contaminate from entering building below. All such coverings are to be removed at end of each working day and reinstalled prior to next day's start up.
- .4 Disconnect and reconnect Electrical Services and Mechanical Equipment as required.
  - .1 Rooftop equipment requiring disconnection and reconnection to be responsibility of Owner (HRCE) unless otherwise specified elsewhere in contract documents.
  - .2 Include for modifications required to existing rooftop curbs and supports and related cabling, conduits, cable trays, ductwork, etc. as required to suit height of new finished roof system.

#### .2 Existing Roof Removal:

- .1 At areas designated for roof removal and replacement, remove perimeter metal flashings, ballast and old appurtenances. Dispose removed items to an appropriate site for building material waste.
- .2 All unused and abandoned pitch pockets, vents, curbs, sleepers, projections, etc. are to be removed from designated areas and disposed of.
  - .1 Obtain verification and authorization from Client before removing and disposing of any suspected unused or abandoned projections.
  - .2 Install new roof decking as required to close off any deck openings prior before proceeding with new roof system installation.
  - .3 Where existing insulation is exposed, examine insulation for any damage and deterioration required to be cut out and repaired with new compatible materials.

#### .3 Substrate Review:

- .1 Exposed roof deck surfaces to be reviewed by Contractor with Consultant. Ensure to review entire roof area to satisfy any warranty requirements of Manufacturer of new roof membrane system.
  - .1 Notify Consultant of review at least forty-eight (48) hours prior to site review.

- .2 Report any anomalies found that may impact soundness and structural integrity of roof system to Consultant and Owner immediately. Areas with damaged decking must be replaced or repaired before any further work may take place on that particular section.
- .3 Ensure roof decks are firm, straight, smooth, dry, free of snow, ice, frost, oils, or other contaminants. Decking must be properly cleaned of any dust and debris prior to proceeding with new installation. Test whether specified adhesion to deck will be obtained where required.
- .4 Prior to application of vapour retarder, examine deck and ensure any defect of level or construction is correct before proceeding with work.
- .5 Verify that roof drains have been installed at proper elevations relative to finished roof surface to allow for sufficient drainage of roof surface.
- .6 Review securement of existing projections and equipment (electrical conduit, gas lines, etc.). If inadequate securement is found, inform Consultant and halt work around that area until situation is rectified.
- .7 Review securement of existing plywood sheathing, wood blocking, and cant strips. Do not install new roofing unless such items are adequately secured to withstand stresses imposed by thermal movement of new roofing components.

### 3.5 CARPENTRY

- .1 On Roof Areas 1.1, 2.1 and 2.2: Refer to drawings for carpentry requirements. Install wood blocking, plywood, and cant strips to accommodate required slopes, insulation, membranes, and finish sheet metal and trim. Carpentry alterations to be performed to accepted trade practices.
- .2 Add new wood blocking as necessary to maintain minimum heights at perimeters and roof curbs.
  - .1 At Existing Roof Curbs: Minimum height to be 203mm (8") above finished roof membrane and at least 51mm (2.0") higher than adjacent roof perimeters, up to a maximum 460mm (1'-6") above finished roof membrane.
    - .1 At metal roof curbs: Where extension height required is greater than 102mm (4.0"), install new galvanized metal C-Channel, prefab curb extension, or prefab curb adapter or reducer to raise curb as required to suit new height.
  - .2 At Existing Parapets: Minimum height to be 102mm (4") above finished roof membrane, unless otherwise indicated on detail drawings.
- .3 Replace any damaged or deteriorated wood at perimeters and projections with new construction grade spruce wood blocking or exterior grade plywood, good one side, to match existing. Determination of suitability to reuse or replace existing wood to be by Observer.
  - .1 Ensure existing wood blocking remaining at perimeters and curbs is securely fastened to existing substrate before installing new wood blocking and plywood.
- .4 Install wood blocking as required to ensure that all roof curbs and sleepers supporting HVAC and mechanical equipment are level.
- .5 Wood to wood, wood to metal, wood to masonry or concrete to be secured at 305mm (12") on center with alternating fasteners staggered.
  - .1 Avoid protruding fastener heads. Where possible, all fasteners to be flush with or slightly sunk below surface of wood blocking being secured.

- .6 All wood blocking and plywood to be considered part of roof, and to be made watertight by end of each work day to eliminate moisture infiltration into roof system.

### 3.6 DECK OVERLAY BOARD

- .1 On Roof Areas 1.1, 2.1 and 2.2: Adhere a layer of deck overlay board in beads of polyurethane foamable roofing adhesive to metal roof deck as per manufacturer's written instructions to meet CSA A123.21 requirements.
  - .1 Non-Asphaltic adhesive primer may be used to increase adhesion to metal deck or on highly absorbent substrates. Consult Manufacturer on use of suitable epoxy coatings, chlorinated rubber, wash primer or other adhesive primers.
  - .2 Do not use wet or damaged deck overlay panels. Panels must be dry for proper installation.
  - .3 Custom cut deck overlay boards at perimeters and projections to suit. Install boards tightly together with no gaps between adjacent boards larger than 3mm (0.125").
    - .1 Cut boards as required to fit snug at all perimeters, walls, and roof projections.
    - .2 Cut straight lines using proper tools and snap chalk lines.
    - .3 Cut boards cleanly where slope changes direction. Do not break boards by stepping on them to acquire changes in deck slope.
  - .4 Install continuous ribbons of polyurethane adhesive in parallel lines centered over top of deck flutes or ribs to meet CSA A123.21 requirements. Where possible, use a "Z" pattern over an application area no larger than 3.66m (12'-0") at a time to minimum securement pattern:
    - .1 Install continuous ribbons of polyurethane adhesive in parallel lines to meet CSA A123.21 requirements. Do not allow rising foam adhesive to skin over. Place roof board panels immediately into wet adhesive.
  - .5 Where cover board is field primed, allow sufficient time for applied primers to dry and flash-off. Roof board surface must be thoroughly dry before installation of membrane.

### 3.7 VAPOUR RETARDER

- .1 On Roof Areas 1.1, 2.1 and 2.2: Install one (1) ply modified bitumen vapour retarder with flashings as per Manufacturer's written guidelines. Installation to be free of blisters, wrinkles and fish-mouths.
  - .1 Vapour retarder must be installed on same day as primer application.
  - .2 Do not install when it is raining or snowing, on wet/humid surfaces, or when inclement weather is expected shortly.
  - .3 Deck substate must be clean, dry and free of dirt, dust, grease or other contaminants.
- .2 Primer Installation:
  - .1 Prime all non-metal exposed surfaces to receive vapour retarder membrane and flashing. Apply primer to clean and dry surfaces with a paint brush, roller or sprayer at temperatures 0°C (31°F) and above.
  - .2 Apply primer at a coverage rate between of 0.1 to 0.5 L/m<sup>2</sup> (0.25 to 1.22 gallon/100 ft<sup>2</sup>) as recommended by membrane manufacturer for surface type.



- .3 Ensure all substrates are fully covered with primer leaving no areas bare and avoid pooling.
- .4 Allow primer to dry completely prior to installation of new vapour retarder membrane.
- .3 Field Membrane Installation:
  - .1 Begin application at bottom of roof slope. Unroll self-adhered membrane onto substrate without adhered for alignment. Do not immediately remove release film.
  - .2 Overlap each preceding sheet by a minimum of 76mm (3") lengthwise following reference chalk line and by a minimum of 152mm (6") at each end. Stagger end laps by at least 305mm (12").
  - .3 Once aligned, peel back a portion of release film and press membrane onto substrate for initial adherence. Hold membrane tight and peel back release film by pulling diagonally.
  - .4 Use a manufacturer recommended weighted roller to press membrane down into substrate including laps. Finish by aligning edge of roller with lower end of side laps and rolling up membrane.
  - .5 Do not cut membrane to remove air bubbles trapped under laps. Squeeze out air bubbles by pushing roller to edge of laps.
  - .6 Carry vapour retarder up all vertical surfaces at parapets and projections where indicated on detail drawings.
- .4 Membrane Flashing Installation:
  - .1 Prime substrate to receive self-adhered base sheet flashing with primer and rate of application as recommended by manufacturer. Avoid pools and heavy areas and allow primer to dry a minimum 30 minutes or until staining does not occur to touch and surface becomes tacky.
  - .2 Ensure complete coverage of primer to both prepared substrates and to field sheet membrane prior to placement of membrane flashing.
  - .3 Install membrane flashing onto substrate in strips one membrane roll wide (40" or 1m) and extend over perimeters as shown on detail drawings
  - .4 Field measure and cut flashing membrane to length required for flashing at each detail and roll up for installation. Allow for encapsulating of new insulation with roof membrane.
  - .5 Unroll and install membrane flashing onto substrate by removing release paper and discarding.
  - .6 Using weighted roller as recommended by manufacturer, roll all surfaces of roof membrane to ensure continuous adhesion with membrane to substrate. Firmly press membrane into substrate to ensure proper bond.
  - .7 Lap membrane flashing onto field membrane a minimum 152mm (6"). Side laps between adjacent sheets to be a minimum of 127mm (5") wide.
  - .8 **INSTALL MEMBRANE GUSSET REINFORCEMENT AT ALL INSIDE AND OUTSIDE CORNERS ON TOP OF BASE SHEET MEMBRANE.**
  - .9 Install vapour retarder tie-in flashings between new vapour retarder and roof membrane at projections and curbs and where indicated in detail drawings.

### 3.8 BASE INSULATION

- .1 On Roof Areas 1.1, 2.1 and 2.2: Install a layer of base insulation boards over prepared vapour retarder in accordance with insulation manufacturer's instructions.
- .2 Where applicable, install tapered base insulation according to layout on reviewed shop drawings and roof plan drawing(s). Report any discrepancies to Consultant before proceeding.
- .3 Do not install more insulation board than can be covered with membrane by end of work day or before onset of inclement weather.
- .4 Do not install warped, curled, damaged, or wet insulation boards.
- .5 Install base insulation boards in parallel rows and butt tightly together with joints staggered by one half board length.
  - .1 Where multiple layers of insulation are required, stagger all board joints at least 305mm (12") between rows.
- .6 On Roof Areas 1.1, 2.1 and 2.2: Adhere base insulation to substrate using continuous beads of polyurethane foamable roofing adhesive. Follow manufacturer's installation instructions.
  - .1 Install continuous ribbons of polyurethane adhesive in parallel lines to meet CSA A123.21 requirements. Use a "Z" pattern over an application area no larger than 3.66m (12'-0") at a time. Minimum securement pattern:
  - .2 Do not allow rising foam adhesive to skin-over. Place insulation panels immediately into wet adhesive.
  - .3 Walk-in board panels to ensure positive adhesion of substrate across full panel. Repeat walk-in every five (5) minutes until insulation is firmly attached.
- .7 On Roof Areas 1.1, 2.1 and 2.2: At all existing roof drain locations, delete a section of base insulation in a 2.4m x 2.4m (8' x 8') area centered around each drain.
  - .1 At each drain location, install a new 2.4m x 2.4m (8' x 8') prefabricated, tapered insulation drain sump over prepared substrate.
- .8 Custom cut insulation boards as required at perimeters and projections to suit. Field cuts to be neat and provide tight fit around penetrations, projections, and at perimeters.
- .9 For uneven surfaces, trimming or slitting of boards may be necessary. Fill all gaps larger than 3mm (1/8") with insulation slivers or continuous spray polyurethane foam insulation to ensure thermal barrier continuity.

### 3.9 OVERLAY INSULATION

- .1 On Roof Areas 1.1, 2.1 and 2.2: Install a continuous layer of overlay insulation boards over base insulation in accordance with insulation manufacturer's instructions.
- .2 Where applicable, install tapered overlay insulation according to layout on reviewed shop drawings and roof plan drawing(s). Report any discrepancies to Consultant before proceeding.
- .3 Do not install more insulation board than can be covered with membrane by end of work day or before onset of inclement weather.
- .4 Do not install warped, curled, damaged, or wet insulation boards.

- .5 Install overlay insulation boards in parallel rows and butt tightly together with joints staggered by one half board length.
  - .1 Where multiple layers of insulation are required, stagger all board joints at least 305mm (12”) between rows.
- .6 On Roof Area 1.1, 2.1 and 2.2: Adhere overlay insulation to substrate using continuous beads of polyurethane foamable roofing adhesive. Follow manufacturer’s installation instructions.
  - .1 Install continuous ribbons of polyurethane adhesive in parallel lines to meet CSA A123.21 requirements. Use a “Z” pattern over an application area no larger than 3.66m (12’-0”) at a time. Minimum securement pattern:
  - .2 Do not allow rising foam adhesive to skin-over. Place insulation panels immediately into wet adhesive.
  - .3 Walk-in board panels to ensure positive adhesion of substrate across full panel. Repeat walk-in every five (5) minutes until insulation is firmly attached.
- .7 Custom cut insulation boards as required at perimeters and projections to suit. Field cuts to be neat and provide tight fit around penetrations, projections, and at perimeters.
- .8 For uneven surfaces, trimming or slitting of boards may be necessary. Fill all gaps larger than 3mm (1/8”) with insulation slivers or continuous spray polyurethane foam insulation to ensure thermal barrier continuity.
- .9 Install tapered insulation crickets over top of overlay insulation in ribbons of polyurethane adhesive.
  - .1 Provide crickets where shown on roof plan, tapered insulation shop drawings, and at all penetrations wider or longer than 305mm (1’-0”) blocking direction of drainage.

### 3.10 COVER BOARD

- .1 On Roof Areas 1.1, 2.1 and 2.2: Install a continuous layer of cover board panels over existing substrate insulation in accordance with insulation manufacturer's instructions.
- .2 Do not install more insulation board than can be covered with membrane by end of work day or before onset of inclement weather.
- .3 Do not install warped, curled, damaged, or wet panel boards.
- .4 Install panels in parallel rows and butt tightly together with joints staggered by one half board length. Where multiple layers of insulation are required, stagger all board joints at least 305mm (12”) between rows.
  - .1 Cut boards as required to fit snug at all perimeters, walls, and roof projections.
  - .2 Cut straight lines using proper tools and snap chalk lines.
  - .3 Cut boards cleanly where slope changes direction. Do not break boards by stepping on them to acquire changes in deck slope.
- .5 For Base Sheet Laminated Cover Board: Install continuous ribbons of polyurethane adhesive in parallel lines to meet CSA A123.21 requirements. Use a “Z” pattern over an application area no larger than 3.66m (12’-0”) at a time to minimum securement pattern:
  - .1 Do not allow rising foam adhesive to skin over. Place roof board panels immediately into wet adhesive.

- .2 Walk-in board panels to ensure positive adhesion to substrate across full panel. Repeat walk-in every five (5) minutes until insulation is firmly attached.
- .6 Custom cut boards as required at perimeters and projections to suit. Field cuts to be neat and provide tight fit around penetrations, projections, and at perimeters. For uneven surfaces, trimming or slitting of boards may be necessary.
- .7 Ensure all panels are fit tightly together. Fill all gaps larger than 3mm (1/8") with insulation slivers or continuous spray polyurethane foam insulation to ensure thermal barrier continuity of same materials.
- .8 With Base Sheet Laminated Panels:
  - .1 Side Laps: Adhere and heat weld with hot air gun or torch to satisfaction of Observer all side laps of modified bitumen base sheet membrane.
  - .2 End Joints: Install 330mm (13") wide self-adhered, modified bitumen base sheet cover strips centered over panel end joints. Cover strips to extend a min. of 152mm (6") past each side of end joint.
  - .3 Ensure all laps and seams in base sheet membrane are well bonded to form a single continuous waterproof membrane barrier.

### 3.11 MODIFIED BITUMEN MEMBRANE APPLICATION

- .1 On Roof Areas 1.1, 2.1 and 2.2: Install a two (2) ply, SBS modified bitumen membrane system overtop of prepared substrate. Base sheet layer to be adhered with self-adhered flashings. Cap sheet layer and flashings to be torch applied.
  - .1 Soprema Option: Base sheet field membrane factory laminated to Cover Board.
  - .2 JM & Siplast Option: Install self-adhered base sheet flashings with primer around perimeters, curb, and projections before torch application of base sheet field membrane.
- .2 Provide materials from same manufacturer to meet material compatibility and warranty requirements necessary to attain specified roofing manufacturer warranty.
- .3 Install membranes in accordance with manufacturer's written instructions and applicable project specific report notes.
- .4 Membrane applications to be free of sags, blisters, wrinkles, and fish-mouths.:
- .5 General Requirements for Application:
  - .1 Tools, Rollers, & Squeegees: Use membrane manufacture's recommended tools and accessories. Keep tools clean during performance of work and frequently replace application roller tips and squeegee heads with new when clogged.
  - .2 Surface Review: Apply over wood, metal, gypsum board and concrete decks which are clean, smooth, and free of snow, ice, moisture, and debris. Concrete decks must have all holes filled with quick drying cement and rough patches removed.
  - .3 Application of Primer: Priming is required for all substrates prior to installation. Avoid pooling primer and allow to completely dry before membrane installation. Drying time will vary according to absorptive qualities of material and ambient weather conditions.
  - .4 First Roll Starting Point: Base sheet to begin at drain level with side lap aligned to centre of drain. Run rolls perpendicular to slope. Cap sheet to be installed over base sheet covering base sheet overlap. Center of cap sheet to align up with centre of drain.

- .5 Relaxing of Roll Membrane: ALL ROLL MEMBRANES ARE TO BE FULLY UNROLLED AND ALLOWED TO RELAX FOR A MIN. OF 15 MINUTES PRIOR TO INSTALLATION. Wait longer in cooler temperatures. Trace zig-zag pattern with torch as recommended by manufacturer over membranes that are covered with thermal-fusible film.
  - .6 Alignment of Rolls: Completely unroll first roll and align with edge of roof. Reroll membrane from both ends to centre and apply as per specifications.
  - .7 Staggering of Sheets: End laps between base and cap sheets to be offset a min. of 610mm (24"). Side laps between base and cap sheets to be offset a min. of 305mm (12"), centered alignment preferred. Laps in same membrane layer to be min. 76mm (3") wide for side laps and min. 305mm (12") wide for end laps. When salvage side laps of base and cap sheets are unequal, adjust cap roll width occasionally to maintain alignment.
  - .8 Procedure to Seal Voids: Where voids are created by overlapping rolls of membrane, cut off corner of salvage edge where covered by next roll of material.
  - .9 Salvage Edge Protection: Granules along edge of membrane to be primed prior to application of adhesive to provide good adhesion of laps.
  - .10 Membrane Flashings: Base flashings to extend min. 102mm (4") onto field of roof. Cap flashings to overlap base sheet flashings and extend min. 152mm (6") onto field or roof. Use wider overlap widths where required by manufacturer for warranty requirements.
  - .11 Bleed-Out at Seams: When torch applying membrane, provide consistent, continuous bleed-out along all seams, no less 3mm (1/8") and no greater than 6mm (1/4") in width.
  - .12 All Seams: Check all seams in all sheets with a round nosed trowel while work is in progress. Repair found deficiencies immediately and before continuing roof installation.
  - .13 Base Sheet Seams: Butter all seams and laps. Provide additional bitumen at point of 90° upturns in base sheet flashings. Recheck self-adhered membrane seams left exposed within forty-eight (48) hours of installation to repair any revealed seam deficiencies with clean, heated trowel.
  - .14 Cap Sheet Seams: At all end laps and membrane flashing overlaps, degranulate area (embed granules) of surface to be bonded by embedding ceramic granules into bitumen of membrane using clean, heated trowel to push in. Measure and use straight chalk lines to mark outline of areas requiring degranulation. Achieve a uniform black surface of bitumen across 100% of embedment areas to be overlapped.
  - .15 Reinforcement: Required at all corners, vents, drains, HVAC units, and gravel stops.
  - .16 Primer Application: Sanded membrane left exposed overnight or longer to be primed before continuing membrane installation to ensure good adhesion.
  - .17 Cold Adhesive Application: Use manufacturer recommended tools and squeegees and ensure recommended rate of adhesive is being applied fully across membrane.
- .6 Correction Requirements for Defects and Deficiencies:
- .1 Delamination: Membrane may not be fully bonded to substrate due to:
    - .1 Moisture present on substrate,
    - .2 Dirt, dust, or other contaminate on substrate acting as a parting agent,

- .3 Inadequate application of primer or adhesive.
- .2 Misalignment: Alignment of row to starting line is lost due to swerving during application or to roll not being unrolled, aligned, and rerolled straight prior to application.
  - .1 Misaligned roll to be cut at point where swerve begins and restarted.
  - .2 Ensure membrane rolls are allowed to relax. Use heat in a zig-zag pattern to relax thermo-fusible films and membrane reinforcement.
  - .3 Ensure pressure is applied evenly across roll during application to avoid drifting.
- .3 Wrinkles: Undulations located on surface of membrane after it has been applied:
  - .1 Cross-Sheet Undulations: Waves in membrane due to installation in a stop and go fashion.
  - .2 Continuous Ridging of Membrane: Formed by movement of substrate underneath membrane. Ensure substrate is secure before continuing.
- .4 Blisters: Pocket of air trapped under membrane where full adhesion was not achieved or trapped moisture released from substrate:
  - .1 Remove and repair significant blisters.
  - .2 Cut blister and adhere any loose membrane.
  - .3 Apply patch membrane over repair area, extend a min. 152mm (6") on all sides.
- .5 Membrane Patches: Cap sheet membrane patches to be installed from seam to seam. Minimum size of membrane patch to be 915 x 915 mm (36" x36").
- .7 Primer Installation:
  - .1 Apply primer to clean and dry surfaces with a paint brush, roller or sprayer at temperatures 0°C (31°F) and above.
  - .2 Apply primer at a coverage rate between of 0.1 to 0.5 L/m<sup>2</sup> (0.25 to 1.22 gallon/100 ff<sup>2</sup>) as recommended by membrane manufacturer for surface type.
  - .3 Ensure all substrates are fully covered with primer with no areas bare and avoid pooling.
  - .4 Allow primer to dry and flash-off prior to installation of new membrane and flashings.
- .8 Base Sheet Field Membrane: Factory Laminated to Cover Board (Soprema Option):
  - .1 Self-adhere first part of dual edge membrane side laps and heat weld with hot air gun or torch remaining part of side laps to satisfaction of Observer.
  - .2 Use a membrane manufacturer recommended weighted roller to press membrane down onto substrate over side laps.
  - .3 Install 330mm (13") wide modified bitumen base sheet cover strips along and centered over all panel end joints.
  - .4 Heat weld side laps and end laps of base sheet field membrane to achieve continuous bond and seal between overlapping sheets.
- .9 Base Sheet Field Membrane, Self-adhered Installation: (JM & Siplast Option)

- .1 Prime substrate and around perimeters to receive new self-adhered base sheet membrane and flashings.
  - .1 Install specified primer at application rate and temperature recommended by manufacturer to avoid pooling and heavy areas.
  - .2 Allow primer to dry a minimum of 30 minutes or until staining does not occur upon touch and surface becomes tacky.
- .2 Field measure and cut membrane to length of run required and roll up for installation.
- .3 Starting at low point of roof, perpendicular to slope, unroll base sheet membrane and position.
- .4 Once aligned in desired position, peel back a portion of release under film and press membrane onto substrate for initial adherence.
- .5 Hold membrane tight and peel back release under film by pulling diagonally to remove fully and discard. Broom sheet into place to ensure full contact with substrate
- .6 Overlap each preceding flashing sheet by min. 76mm (3") on side laps and align bottom edge to a chalk reference line along base sheet membrane. Lap membrane flashing onto field membrane a minimum 102mm (4").
- .7 Use a membrane manufacturer recommended weighted roller to press membrane down onto substrate including laps. Finish by aligning edge of roller with lower end of side laps and rolling up membrane.
  - .1 Do not cut membrane to remove trapped air bubbles. Squeeze out air bubbles by pushing roller to edge of laps.
- .8 Heat weld side laps and end laps of base sheet field membrane to achieve continuous bond and seal between overlapping sheets.
- .10 Base Sheet Flashing, Self-adhered Installation:
  - .1 Where required, prime concrete and wood surfaces at roof projections and around perimeter to receive new base sheet membrane flashings.
  - .2 Install membrane flashing onto substrate in strips one membrane roll wide (40" or 1m) and extend over perimeters as shown on detail drawings
  - .3 Field measure and cut flashing membrane to length required for flashing at each detail and roll up for installation.
  - .4 Install base sheet flashing starting at outside face of perimeter, running across perimeter detail, and down onto flat of roof.
  - .5 Once aligned in position, peel back a portion of release sheet and press membrane onto substrate for initial adherence. Hold membrane flashing tight and peel back release sheet by pulling diagonally.
  - .6 Overlap each preceding flashing sheet by min. 76mm (3") on side laps and align bottom edge to a chalk reference line along base sheet membrane. Lap membrane flashing onto field membrane a minimum 102mm (4").
  - .7 Use a membrane manufacturer recommended weighted roller to press membrane down onto substrate including laps. Finish by aligning edge of roller with lower end of side laps and rolling up membrane.

- .1 Do not cut membrane to remove trapped air bubbles. Squeeze out air bubbles by pushing roller to edge of laps.
- .8 Provide preliminary securement of membrane on outside edge or perimeters before installation of finish metal flashings and trim. Fasten top edge of membrane flashings on outside face of perimeter details with round top nails spaced every 229mm (9") o/c.
- .9 Heat weld side laps and end laps of base sheet flashing to achieve continuous bond and seal between overlapping sheets.
- .11 Gusset Reinforcement:
  - .1 Install membrane gussets at inside and outside corner locations around perimeters, roof curbs, and sleepers to reinforce base sheet membrane layer.
    - .1 Gusset size to be approx. 76x152mm (3"x6") with bottom cut to form "V" shape. Where installing over cant strip, provide additional "V" shape at top of gusset.
    - .2 OBSERVER TO REVIEW MEMBRANE GUSSET INSTALLATION WORK BEFORE COMMENCEMENT OF CAP SHEET MEMBRANE INSTALLATION.
- .12 Cap Sheet Field Membrane, Torch Installation:
  - .1 Complete installation of base sheet flashing prior to installing membrane cap sheet and cap sheet flashings.
  - .2 Field measure and cut membrane to length of run required and roll up for installation.
  - .3 Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and re-roll from both ends.
  - .4 Unroll and install cap sheet carefully in straight and parallel rows keeping majority of flame on membrane roll.
  - .5 Cap sheet to be torched across flat of roof, overtop of base sheet, and terminated at perimeters and vertical surfaces ensuring a good bond.
  - .6 Lap sheets 76mm (3") for side laps and a minimum 152mm (6") for end laps. Offset joints in cap sheet 305mm (12") minimum from those of base sheet.
  - .7 Heat weld side laps and end laps of cap sheet field membrane to achieve continuous bond and seal between overlapping sheets.
- .13 Cap Sheet Flashing, Torch Installation:
  - .1 Cap sheet membrane flashing to be torched up and over perimeter details.
  - .2 Install membrane flashing onto substrate in strips one membrane roll wide (40" or 1m) and extend up perimeters as shown on detail drawings
  - .3 Field measure and cut flashing membrane to length required for flashing at each detail and roll up for installation.
  - .4 Set cap sheet to offset base sheet flashing joints by 50% and extend a minimum of 152mm (6") onto roof. All side lap joints to be a minimum 76mm (3").
  - .5 Align bottom edge to a chalk reference line along cap sheet membrane.



- .6 Install cap sheet flashing onto field membrane a minimum 102mm (4") at base of perimeter detail. Run flashing up vertical and across perimeter detail to outside edge.
- .7 Overlap each preceding cap sheet flashing sheet by min. 76mm (3") on side laps. Offset joints in cap sheet flashing 305mm (12") minimum from those of base sheet flashing.
- .8 Properly secure flashings to their support, without sags, blisters, fish-mouths or wrinkles with terminations as indicated on drawings and details.
- .9 Heat weld side laps and end laps of cap sheet flashing to achieve continuous bond and seal between overlapping sheets.

### 3.12 LIQUID APPLIED PMMA RESIN FLASHINGS

- .1 On Roof Area 1.1, 2.1 and 2.2: Where specifically indicated in detail drawings and at any junctions where conventional installation of membrane flashings are not feasible, install new liquid applied resin flashing system.
- .2 Resin system to be a layered application consisting of two coats of thixotropic catalyzed polymethylmethacrylate (PMMA) resin encapsulating a layer of polyester fleece reinforcement.
- .3 Installation of liquid applied flashing system to follow in STRICT ACCORDANCE with manufacturer's written instructions.
- .4 Ensure substrates are free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, bituminous products, release agents, laitance, paint, loose particles/friable matter, rust or any other material that would be detrimental to adhesion of catalyzed primer and/or resin to substrate.
  - .1 Some surfaces may require scarification, shot-blasting, or grinding to achieve a suitable substrate. Wipe surfaces with a clean cloth saturated with specified cleaner/solvent to remove grease, oils or dust that may affect adhesion and to cured PMMA surfaces to receive a subsequent coat of resin.
  - .2 Concrete substrates to receive an application of specified PMMA roofing system to have a maximum moisture content of 6% and a maximum internal relative humidity of 75%.
- .5 Preparation of Concrete Block and/or Masonry Substrates:
  - .1 Existing concrete substrates to have a minimum hardness of 24 N/mm<sup>2</sup> (3,500 psi).
  - .2 Scarify or shot-blast concrete or masonry surfaces to provide a sound substrate free from laitance and residue from bitumen, coal tar, primer, coatings, adhesives, sealer or any material that may inhibit adhesion.
  - .3 Prepare concrete surface to generate a concrete surface profile of CSP-2 to CSP-4 as defined by ICRI.
  - .4 Repair spalls and voids on vertical or horizontal surfaces using specified primer and preparation paste.
- .6 Preparation of Poured or Precast Concrete Substrates:
  - .1 Repair and Leveling: Before application of roofing membrane, and after priming, fill all joints, cracks, voids, fractures, depressions, small indentations, and low areas in substrate using specified paste or repair mortar.

- .2 Prime cracks and joints with specified PMMA primer and fill cracks and joints using specified preparation paste prior to flashing application. Commence flashing application immediately following catalyzation of preparation paste.
- .3 Prime areas of concrete substrate intended for repair using specified PMMA primer. Fill areas using specified paste or repair mortar and allow to catalyze. Follow paste or repair mortar manufacturer's published minimum and maximum product thickness limitations per lift.
- .7 Preparation of Steel and/or Aluminum Substrates:
  - .1 Grind to generate a "white-metal" surface and remove loose particles. Extend preparation area a minimum of 13mm ( $\frac{1}{2}$ " ) beyond termination of roofing/flashing system. Do not use cleaner/solvent after grinding. Notch steel surfaces to provide a rust-stop where detailed.
- .8 Preparation of Wood and/or Plywood Flashing Substrates:
  - .1 Tape joints between plywood or wood panels using specified tape and prime wood/plywood surfaces to receive specified flashing system with specified PMMA-based primer and allow primer to set prior to application of flashing system.
- .9 Preparation of Gypsum Board, DensDeck, and/or DensDeck Prime Substrates:
  - .1 Ensure insulation panels have been properly secured. Review surface of panel insulation system to ensure that edges are level and even between adjoining panels. Tape panel joints and panel terminations at nailers, walls, perimeter and penetrations using specified tape, centering tape strips over joints or panel edges.
- .10 Preparation of Plastic (PVC, ABS) Substrates:
  - .1 Tape joint around bottom of pipe penetrations using specified tape. Lightly sand and prime wood/plywood surfaces to receive specified flashing system with specified PMMA-based primer and allow primer to set prior to application of flashing system.
  - .2 Fill joints, voids, and cracks around base of pipe penetrations using specified preparation paste or repair mortar prior to flashing application. Use tape joints around base for larger gaps.
  - .3 Follow paste or repair mortar manufacturer's published minimum and maximum product thickness limitations per lift. Commence flashing application immediately following catalyzation of preparation paste.
- .11 Preparation/Mixing/Catalyzing Resin Products:
  - .1 Pour desired quantity of resin into a clean container and using a spiral mixer or mixing paddle, stir liquid for time period specified by resin manufacturer.
  - .2 Calculate amount of catalyst powder needed using manufacturer's guidelines and add pre-measured catalyst to resin component.
  - .3 Mix again for time period specified by resin manufacturer, ensuring that product is free from swirls and bubbles.
  - .4 Ensure that air is not entrained into product during mixing process. To avoid aeration, do not use a spiral mixer unless spiral section of mixer can be fully contained in liquid during mixing process.

- .5 Mix only enough product to ensure it can be applied before expiration of resin pot life.
- .12 Primer Application:
- .1 Apply primer resin using a roller or brush at minimum rate specified by primer manufacturer over poured reinforced concrete substrates.
  - .2 Apply primer resin using a roller or brush at increased rate specified by primer manufacturer over DensDeck, DensDeck Prime, and granule surfaced membrane substrates.
  - .3 Increase application rates over other absorbent substrates. Do not let resin pool or pond. Do not under-apply or over-apply primers as this may interfere with proper primer catalyzation.
  - .4 Make allowances for saturation of roller covers and application equipment.
- .13 Paste Application:
- .1 Allow primer to set and apply catalyzed preparation paste using a trowel.
  - .2 Before application of resin over catalyzed paste surface, specified cleaner/solvent, wipe surface of paste using specified cleaner/solvent and allow to dry.
  - .3 Treat surface again if not followed up by resin application within 60 minutes.
- .14 Flashing Membrane Application:
- .1 Using masking tape, mask perimeter of area to receive flashing system.
  - .2 Apply resin primer to substrates requiring additional preparation and allow primer to set.
  - .3 Pre-cut fleece to ensure a proper fit at transitions and corners prior to membrane application.
  - .4 Apply an even, generous base coat of flashing resin using a roller at minimum rate specified by resin manufacturer to prepared surfaces requiring flashing coverage.
  - .5 Work fleece into wet, catalyzed resin using a brush or roller to fully embed fleece in resin and remove trapped air.
  - .6 Lap fleece layers a minimum of 51mm (2") and apply an additional coat of catalyzed resin between layers of overlapping fleece.
  - .7 Again using a roller, apply an even top coat of catalyzed resin at minimum rate specified by resin manufacturer immediately following embedment of fleece, ensuring full saturation of fleece.
  - .8 Ensure that flashing resin is applied to extend a 6mm (0.25") beyond fleece. Remove tape before catalyzed resin sets. Make allowances for saturation of roller covers and application equipment.
  - .9 Should work be interrupted for more than 12 hours or surface of catalyzed resin becomes dirty or contaminated by elements, wipe surface to be lapped with new flashing resin using specified cleaner/solvent.
  - .10 Allow surface to dry for a minimum 20 minutes and a maximum 60 minutes before continuing work.

.15 Skid Resistant Surfacing:

- .1 Over horizontal area of new resin flashing, apply an additional top coat of catalyzed roof resin at minimum rate specified by manufacturer; and broadcast granules into resin at a rate recommended by manufacturer before resin sets.
- .2 Apply a clear coat of resin over granular surface if required by system manufacturer.

### 3.13 ROOF PENETRATIONS & ACCESSORIES

- .1 On All Roof Replacement Areas: Install vent stack flashings, support flashings, and other roof penetration flashings, and seal with roof membrane in accordance with Manufacturer's instructions and as indicated on detail drawings.
  - .1 Prime all metal flanges with modified bitumen compatible primer, and allow any solvents to flash-off and dry completely prior to installation.
  - .2 Set metal flange in bed of manufacturer recommended and system compatible roofing cement applied over base sheet membrane, ensuring a positive bond.
  - .3 Install an additional ply of base sheet membrane flashing over metal flange prior to installing cap sheet membrane. Additional ply of base membrane to extend a minimum of 152mm (6") past all edges of metal flange.
  - .4 Install cap sheet ply over base flashing ensuring a full bond to base ply membrane.
  - .5 Apply continuous bead of manufacturer's recommended and system compatible sealant around penetration at point where membrane terminates.
- .2 Reinstall and modify existing lightning protection system to suit new roof system installation.
- .3 Sacrificial Protection Membrane: Protect surface of finished roof membrane from damage underneath all rooftop supports and equipment laid on top of roof membrane.
  - .1 Provide self adhered or cold applied sacrificial squares of matching cap sheet membrane under each base or footing of rooftop support and equipment.
  - .2 Custom cut cap sheet squares to suit width and length of each occurrence and include additional minimum 51mm (2.0") extension of membrane on all sides.

### 3.14 ROOF DRAINS

- .1 General Practice:
  - .1 Ensure existing roof drains, rain gutters, and down pipes are clear of debris and are free flowing prior to installation of new roof system.
    - .1 Any blockages are to be reported prior to start of Work. Once Work has begun, Contractor assumes responsibility for free flowing drains and clearing blockages at no additional cost to Owner.
    - .2 Where required for new roof drains and interior plumbing, Contractor to provide interior plumbing and hook-up to existing storm water drainage system and co-ordinate installation of same with Owner.
  - .2 Prior to installation of new roof, ensure that all drains are located at a height where new roof system is able to clear majority of roof top water caused by rainfall within a seventy-two (72) hour period.

- .3 Once work has begun, no roof area to be left overnight without adequate provision for drainage.
- .4 Install drains in accordance with detail drawings and as per manufacturer's written instructions and guidelines.
- .2 Roof Drain Installation:
  - .1 On Roof Areas 1.1, 2.1 and 2.2: At all existing roof drain locations, install new spun copper retrofit drain inserts into existing drain piping with attached new U-Flow connectors. Drain body insert to be secured to substrate with min. four (4) fasteners per drain as required to properly secure drain body.
    - .1 At all existing roof drains employing control flow weir devices, it is mandatory to reinstate existing devices or provide new control flow devices with equivalent flow rates inside new roof drains.
    - .2 Affix U-Flow connector seal to bottom of drain stem before insert retrofit drain body down into existing storm drainage pipe.
  - .2 Set metal flange of drain body into continuous bed of manufacturer recommended and system compatible roofing cement applied over base sheet membrane.
  - .3 Mechanically secure drain body to deck and substrate with min. four (4) fasteners per drain through drain flange or by underdeck clamping ring.
  - .4 Install target patch of membrane reinforcement over metal drain flange. Use a square of 1m x 1m (39" x 39") base sheet membrane and install over drain at a 45° angle to direction of base sheet rolls.
  - .5 Install cap sheet over base sheet membrane with drain in center of roll and without seams in drain area.
    - .1 All end laps of cap sheet to be min. 915mm (36") away from drain.
    - .2 Where seams of cap sheet do not align properly with drain location, install cap sheet over drain area first and picture-frame cap sheet into remainder of roof.
    - .3 At drain sump areas larger than 1.2m x 1.2m (4' x 4'), install cap sheet over sump area first without any endlaps and picture-frame into remainder of roof.
  - .6 Place Clamping Ring over raised bolt studs. Install stainless steel self locking nuts to tighten Clamping Ring against membrane flashings until secure.
  - .7 Install ballast guard strainer dome and secure with cotterless pin or wing nut screw.

### 3.15 MISCELLANEOUS MECHANICAL & ELECTRICAL

- .1 Owner (HRCE) is responsible for all Mechanical and Electrical Work required to perform complete installation of new roofing.
  - .1 Coordinate any planned disruptions in advance with Owner to minimize inconvenience.
- .2 HVAC and Rooftop Equipment: To be disconnected, lifted (if necessary), modified, and reconnected for all Heating, Ventilation, Air Conditioning, and Mechanical units as required to for new roof system.

- .1 Modify existing sleepers, curbs, and supports as required to suit new roof system installation and configuration as detailed. Ensure modified sleepers, curbs, and supports are made watertight with new membrane and flashings as required.
- .2 Remove and dispose of identified and designated abandoned, redundant, and unused HVAC equipment from roof and worksite.
- .3 Gas Lines and Conduits: Disconnect, modify, and reconnect all gas lines, electrical lines, and conduits as required to suit new roof installation height and configuration of projection detailing.
  - .1 All gas line work must be performed by a qualified Gas Fitter and must conform to requirements of CSA B149.1-10.
  - .2 Re-install gas lines and conduits at a height of 150mm (6") to 200mm (8") above finished roof surface. Secure all loose cabling and conduits off surface of roof membrane.
  - .3 Ensure that all gas line penetrations are separated from all electrical line penetrations with their own roof flashing supports. Provide any new sleeves, goosenecks, or curbs required using Rimkus approved flashing supports and installation methods.
  - .4 At threaded gas line piping, which cannot be permanently enclosed or covered, construct new insulated and waterproof dog house detail with removable lid for periodic thread inspection.
  - .5 Paint all gas lines on areas of roof work with exterior grade, yellow paint for metal surfaces; Rust Paint by Tremclad or Rimkus approved equivalent.
- .4 Underdeck Securement: Where existing sections of roof decking are to be removed, ensure any cabling, conduits, and attachments (plumbing, electrical wiring, lighting fixtures, etc.) secured to underside are disconnected, removed, and relocated. Notify Owner's Representative, if necessary, to have interior services disconnected, removed, and relocated by Owner.

### **3.16 TEMPORARY WATER CUT-OFFS**

- .1 All membrane flashings to be installed concurrently with roof membrane in order to keep roof system watertight during performance of work.
- .2 Temporary waterproof seals to be placed on daily work as required. All temporary water-stops to be constructed to provide a one hundred (100) percent watertight seal.
- .3 New roofing membrane to be carried into water-stop. Water-stop to be sealed to roof deck and/or substrate to prevent water travel and infiltration under new or existing roofing.
- .4 Edge of roof membrane to be sealed in a continuous heavy application of sealant. Temporary seals to be removed and cleaned up before proceeding with remaining work.
- .5 When work resumes, cut out and dispose of all contaminated membrane. All sealant, contaminated membrane, insulation fillers, etc. to be removed from work area and properly disposed of offsite. Reuse of these materials in new work is strictly prohibited.
- .6 If inclement weather occurs while a temporary water-stop is in place, Contractor to provide all necessary labour required to monitor situation and maintain watertight condition.
- .7 If any water is allowed to penetrate under newly completed roofing, then affected area to be cut out, removed, and replaced with new materials at Contractor's own expense.

### **3.17 METAL FLASHINGS**

- .1 On Roof Areas 1.1, 2.1 and 2.2: After installation of roof membrane and membrane flashings, new perimeter metal and metal flashings to be installed as detailed in Section 07 62 00 and as indicated on drawings.

### **3.18 SEALANTS**

- .1 On Roof Areas 1.1, 2.1 and 2.2: After installation of roof membrane and membrane flashings, install sealants as per Section 07 92 00 – Sealants and as recommended by membrane manufacturer.

### **3.19 CLEAN-UP**

- .1 On Roof Areas 1.1, 2.1 and 2.2: Clean up and remove from job site on a daily basis, all rubbish and surplus materials resulting from this work.
- .2 Drag a magnetic bar across work area and grounds to ensure removal of all discarded fasteners and sharp metal debris.

**END OF SECTION - 07 52 16**

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## **PART 1 - GENERAL**

### **1.1 SUMMARY**

- .1 Section Includes: Supply and installation of new prefinished sheet metal flashings and counter flashings to complete roof system installation.
  - .1 Unless specifically indicated otherwise, all references to sheet metal flashings in specifications and on drawings to refer to new prepainted steel.
  - .2 Coordinate all work of this section with other sections and trades as required to ensure proper installation of specified components.

### **1.2 RELATED SECTIONS**

- .1 Section 07 92 00 – Joint Sealants.

### **1.3 REFERENCES**

- .1 Reference Standards: Most stringent requirement to govern conflicts between standards.
  - .1 American Society for Testing and Materials (ASTM):
    - .1 A606M-18: Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.
    - .2 A653M-19a: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
    - .3 A792M-10(2015): Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
    - .4 A924M-19: Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
  - .2 Canadian General Standards Board (CAN/CGSB):
    - .1 51.32M: Sheathing, Membrane, Breather Type.
    - .2 93.1M: Sheet, Aluminum Alloy, Prefinished.
  - .3 Canadian Standards Association (CAN/CSA):
    - .1 S136-16: Specification for Design of Cold Formed Steel Structural Members.
    - .2 S269.2-16: Access Scaffolding for Construction Purposes.
  - .4 Canadian Sheet Steel Building Institute (CSSBI):
    - .1 20M-2015: Standard for Sheet Steel Cladding for Architectural, Industrial, and Commercial Building Applications.
  - .5 Canadian Roofing Contractors Association (CRCA):
    - .1 Roofing Specifications Manual.
  - .6 Canadian Standards Association (CAN/CSA):
    - .1 B-111: Wire Nails, Spikes and Staples.
  - .7 Sheet Metal and Air Conditioning Contractors National Association (SMACNA):

- .1 Architectural Sheet Metal Manual, Seventh Edition, 2012.

#### 1.4 SUBMITTALS

- .1 Procedures: Provide listed submittals to Section 01 33 00.
- .2 Samples: Submit min. 51mm x 51mm (2" x 2") sheet metal flashing sample for each type of material, finish, and colour specified or chosen by Owner from standard manufacturer colour range.
  - .1 Samples to fully represent physical and chemical properties of materials to be supplied and installed.
  - .2 Samples to be reviewed by Owner before order and delivery of materials. Return and restocking fees for incorrect or rejected materials to be at no additional cost to Owner.

#### 1.5 CLOSEOUT SUBMITTALS

- .1 Procedures: Provide project closeout submittals to Section 01 77 00.
- .2 Warranty Documentation: Signed Contractor Warranty for Workmanship covering metal work.

#### 1.6 QUALITY ASSURANCE

- .1 Installer Qualifications: Bondable contractor using skilled tradespeople with equipment adequate for project to perform work in an expeditious manner. Use only manufacturer approved installers to meet warranty requirements.
  - .1 Contractor preapproved by Owner and Consultant.
  - .2 Member of Roofing Contractors Association of Nova Scotia (RCANS) in good standing.
  - .3 Minimum 10 years of relevant experience with similar materials.
  - .4 And licensed for Place of the Work.
- .2 Perform Work in accordance with Contracts Documents and manufacturer's written instructions.
- .3 Make no deviation from Specifications or approved Shop Drawings without prior written approval by Consultant and, if applicable, manufacturer.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, and handle materials to manufacturer's instructions and CSSBI guidelines.
  - .1 Review condition of materials at delivery. Remove and replace damaged products at own expense, including those identified by Observer.
- .2 Do not store metals in direct contact with earth, road surface, roof deck, or other metals.
  - .1 Do not store materials on roof.
- .3 Store materials under cover, on elevated platforms, and protect from elements in a dry, well ventilated location.
  - .1 Place suitable supports or pallets under metal stock upon delivery.
  - .2 Protect metal from scratches, dents, punctures, and moisture.
  - .3 Store caulking and sealants at +5°C minimum.
- .4 Handle and store products in a manner to prevent damage, oxidization, and deterioration.

- .1 Do not allow metal panels to bend or sag during handling and transport.
- .2 Bring to roof and work area only those materials to be installed on same day.

## **1.8 SAFETY AND PROTECTION**

- .1 Scaffolding:
  - .1 Where required for access, scaffolding for construction purposes to CSA S269.2.
- .2 Safety:
  - .1 Comply with safety requirements as per current printed edition of OHSA.
  - .2 Wear protective gear during installation as required by job conditions or manufacturer.
- .3 Solvents, Adhesives, and Membranes
  - .1 Bring to roof only enough solvents, adhesives, and sealants required for same day use. Do not leave adhesives on roof over night.
  - .2 Adhesives to be stored in their overnight containers. Keep product from freezing.
- .4 Hoisting & Protection:
  - .1 Protect walls and roof perimeters from damage where hoisting is required.
  - .2 Protect roofs from damage due to traffic and material handling during project.
- .5 Fire Safety:
  - .1 Keep charged and ready fire extinguishers on site at all times, including on roof, at access points to building interior, and wherever solvent based products are stored.

## **1.9 WARRANTY**

- .1 Contractor Warranty: Workmanship.
  - .1 Provide Contractor Warranty for Workmanship covering metal work on a certificate or form preapproved by Roofing Contractors Association of Nova Scotia (RCANS) or specified on Contractor's Letterhead, signed, authorized, and executed for project.
    - .1 Warranty Period: Not less than 2 years from date of Substantial Completion.
  - .2 Metal work installation to be warranted free from defects related to workmanship or material deficiencies, including but not limited to water penetration, material deformation, and fading of finish.
    - .1 During warranty period provide all labour and materials required to promptly repair and rectify noted defects, in accordance with project Contract Documents, at no additional cost to Owner.

## **1.10 CONSTRUCTION REVIEW AND OBSERVATION**

- .1 Rimkus Consulting Group Canada Inc., hereafter known as "Observer", is an independent Observation agency appointed by Owner to observe performance of Work required by this section and to review construction progress.

- .1 Arrange a Prestart meeting on-site with Observer no more than 3 weeks prior to commencement at project site. Obtain Observer's instructions and reference procedures to be followed on project.
  - .2 Provide Observer with anticipated beginning date for each phase of Work, at least 48 hours prior to commencement of each phase.
  - .3 Where required for warranty, arrange for Final Observation and review of installed work with both Observer and manufacturer's technical representative.
- .2 When testing or observations reveal work by Contractor failing to meet contract requirements, pay for additional testing and observation work required by Observer or third-party testing agency for correction of deficient installed work, at no additional cost to Owner.
  - .3 Copies of Observation reports issued to Owner and Prime Contractor.

## **PART 2 - PRODUCTS**

### **2.1 METAL FLASHINGS**

- .1 Prefinished Steel Flashings: Prefinished cap flashings, counter flashings, drip flashings, jamb flashings, and closure strips to be fabricated from steel with hot-dip galvanization to ASTM A653M, Grade 230 with Z275 zinc coating.
  - .1 Base Steel: Minimum 0.61 mm (24-gauge, 0.024") nominal core thickness.
  - .2 Finish: Silicone Modified Polyester (SMP) applied over pretreated substrate:
    - .1 WeatherXL SMP topcoat by Valspar Corp.,
    - .2 Perspectra Plus Series SMP topcoat by ArcelorMittal.
  - .3 Colour: Colour to be chosen by Owner from manufacturer standard colour range.
- .2 Flashing Securement: Metal flashing hook strips, cleats, and clips to be fabricated from steel with hot-dip galvanization to ASTM A653M, Grade 230 with Z275 zinc coating. Securement flashings to be two gauges thicker than that of metal flashing being secured.
  - .1 Base Steel: Minimum 0.76 mm (22-gauge, 0.030") nominal core thickness.
  - .2 Colour and finish of securement strips to match prefinished metal flashings.
  - .3 Provide hook strips in continuous lengths, not short segments, to match metal flashings.

### **2.2 ACCESSORIES**

- .1 Dissimilar Materials: Protect material from electrolytic action when dissimilar metals are in direct contact with one another.
  - .1 Underlay Sheet: Smooth unsaturated quality rosin sized paper weighing not less than 0.3 Kg/m<sup>2</sup> (6 lb. per 100 ft<sup>2</sup>), unless otherwise shown, to CSA A123.3M.
  - .2 Painting: Paint mating surfaces of aluminum and galvanized steel with bituminous or zinc chromate primers.
  - .3 Taping: Apply self-adhering tape or gasket with non-absorptive materials or sealants.
- .2 Bituminous Paint: Gilsonite asphalt 910-02 by Bakelite to CGSB 1-GP-108 Type II.
- .3 Joint Filler: Polyethylene, urethane, or neoprene extruded, closed cell foam to Section 07 92 00.

- .4 Sealants: Joint and finish sealants to Section 07 92 00.
- .5 Touch-up Paint: High grade enamel paint as recommended by metal manufacturer and matching colour of prefinished metal being used.

### 2.3 FASTENERS

- .1 General: Use galvanized, copper, aluminum, stainless steel, or coated screws most compatible with materials being installed to avoid corrosion caused by galvanic reaction.
- .2 Fasteners to Wood: Space fasteners at max. 610mm (24") on center and stagger.
  - .1 Galvanized nails, with annular thread, length to penetrate into base min. 25mm (1"),
  - .2 Min. No.8 coated steel screws to penetrate wood surface by min. 19mm (0.75").
- .3 Exposed Fasteners:
  - .1 Nylon headed No.14 Colormate fasteners by Leland Industries with hex head and self tapping or drill point tips. Length to suit installation. Colour head to match prepainted metal being secured.
  - .2 Hex head, cadmium plated metal screws with neoprene washers as manufactured by Fabco Fastening Systems, Atlas, Perma-Grip, or Rimkus approved equal. Provide with screw head caps to match colour of materials being secured.
- .4 Masonry Anchors: Rawl lead lags for screws as recommended by manufacturer.
- .5 Masonry Fasteners: Tapcon, Gripcon or Rawl spike sized to penetrate concrete 38mm (1.5") minimum unless otherwise shown.
- .6 Masonry Fasteners: Tapcon screws, Gripcon screws, or Rawl spikes with factory applied corrosion resistant coating.
  - .1 Minimum 6mm (0.25") diameter and of sufficient length to provide a minimum of 38mm (1.5") of penetration into substrate. Predrill holes into masonry to suit application.
- .7 Wedges: Rolled plumber sheet lead. Secure metal flashings on inside and should be secured with No.10 galvanized screws through neoprene washers at 760 mm (30") on center.
- .8 Pop Rivets: All stainless steel, blind pop rivets meeting ASME/ANSI B18.1.1.
  - .1 Minimum 6mm (0.25") head diameter with 3mm (0.125") shank diameter and a grip range of 4.7mm to 6.4mm (0.1875 to 0.25").
  - .2 Body and mandrel to be constructed from high-shear, 300 series stainless steel.

### 2.4 FABRICATION

- .1 Form bends with straight sharp lines, angles and corners into true planes, free from twists, buckles, dents and other visual distortions.
  - .1 Verify all dimensions on site affecting work of this section prior to fabrication.
- .2 Fabricate all possible work in shop in default lengths of 2.4m (8'-0") by brake forming, bench cutting, drilling, and shaping, ready for field installation
  - .1 Horizontal Flashings Wider Than 16": Cap flashings and flashings with horizontal sections having a dimension greater than 406mm (16") to be fabricated in maximum lengths of 1.2m (4'-0").

- .2 Horizontal Flashings Wider Than 20": Cap flashings and flashings with horizontal sections having a dimension greater than 508mm (20") to be fabricated with 25mm (1") high lock-folded standing seams.
- .3 Curved Perimeter Flashings: Cap flashings and flashings over curved perimeters and curbs to be fabricated in lengths of 0.61m (2'-0") or less to suit radius of arc.
- .4 Corner Flashings: Cap flashings and flashings to be fabricated with 25mm (1") high lock-folded standing seam joints at corner miters.
- .3 Fabricate sheet metal components to dimensions, profiles, shapes, and gauges shown on Shop Drawings and verified by site measurements.
  - .1 Profiled metal components to be cold rolled.
  - .2 Fabricate drip and sill flashings with minimum 2% downward slope outward to encourage drainage.
  - .3 End joints of adjacent lengths of metal flashing to be made using S-lock jointing to allow for thermal movement.
  - .4 Exposed metal flashings edges to be double-backed or hemmed min. 13mm (0.5") for appearance and stiffness. Raw edges not accepted.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION & PREPARATION**

- .1 Examine work of other Sections upon which work of this Section depends.
  - .1 Prior to application of flashings, review roof perimeters, parapets, curbs, and projections.
- .2 Examine installed membrane flashings for any defect of level or construction that may impact installation work before proceeding.
  - .1 Do not cut-off or remove installed membrane flashings turned down over exterior face of roof perimeters. Installed membrane to remain as part of complete roof installation.
- .3 Report discrepancies to Observer that may affect performance of roof system and deviations from specified tolerances.
  - .1 Defective or improper work must be corrected before proceeding with installation of sheet metal flashings.
- .4 Protect roof surfaces from damage and metal debris generated by work of this section.

### **3.2 MOCK-UP SAMPLE**

- .1 Construct full size mock-up sample of typical sheet metal cap flashing installation including typical components, flashings, hook strips, cleats, and securement to substrate.
  - .1 Minimum size to be 3.66m to 4.88m (12'-0" to 16'-0') in length, at location chosen with Observer. Installation must include at least one S-lock joint.
  - .2 All materials to be supplied and installed in accordance with Contract Documents.
  - .3 Mock-up to demonstrate methods of attachment, typical components, and connections.
- .2 Reviewed and accepted Mock-up to represent minimum base standard for remaining work.

- .1 Accepted mock-up may remain in place and form part of completed Work.
- .3 Provide any additional mock-up samples as reasonably requested by Observer.

### 3.3 SHEET METAL INSTALLATION

- .1 Sheet metal work to be installed in a uniform manner, true to line, and free of dents, oil canning, warping, and distortions.
  - .1 Provide metal work to cover perimeters of entire roof area and make watertight under all service and weather conditions.
- .2 Install sheet metal flashings at copings, perimeters, walls, joints, curbs, roof openings, and other locations where required to protect membrane flashings, and as shown on drawings.
  - .1 Provide perimeter metal flashings with slope toward roof interior at minimum 4% slope.
  - .2 Do not form open metal joints or create pockets that fail to drain water.
  - .3 Provide concealed metal hook strips, locking strips, and clips where shown on drawings and as required to permanently hold flashing in place.
    - .1 Install concealed hook strips along all exterior perimeter faces and as detailed.
    - .2 Secure continuous hook strips, spaced at 152mm (6") on center and in staggered V-pattern. Keep lower fasteners within 32mm (1.25") of bottom of drip edge.
  - .4 Install lengths of sheet metal flashings with fasteners concealed inside S-lock joints; minimum two fasteners per joint.
    - .1 Space joints evenly where exposed to view.
  - .5 Provide inside and outside corner flashings by means of 25mm (1") high lock-folded standing seam joints at corner miters. Do not use pop rivets.
    - .1 Include intermediate securement clips in folded joint. Apply sealant before locking raised seams in place.
  - .6 On perimeter cap sheet flashings, exposed fastening not permitted on exterior face visible to public, without approval of Observer.
    - .1 Exposed fastening on interior face of perimeter cap flashing permitted.
  - .7 Space fasteners evenly and in consistent pattern. Use lead plugs and screws with rubber washers where metal flashings are installed to concrete or masonry.
- .3 Provide protection for metal work from potential galvanic action.
  - .1 Where sheet metal flashings directly contact masonry, concrete, or a different type of metal, back-paint surfaces with bituminous paint at rate of 0.12L/m<sup>2</sup> (0.25 Gal/100 ft<sup>2</sup>).
  - .2 Where sheet metal flashings directly contact uncovered wood or masonry surfaces, provide underlay separator sheet and overlap joints min. 51mm (2"). Turn up 76mm (3") at edges where horizontal surfaces intersect vertical planes.
- .4 Clean reglets in masonry walls and make free of dust and contaminates.
  - .1 Where existing reglets can not be reused, saw cut new continuous reglets 10mm (0.4") wide, 25mm (1.0") deep, or suit existing site conditions.

- .2 Secure top of metal flashings into reglet joints using lead wedges spaced at 229mm (9") on center, and set min. 6mm (0.25") out from face of masonry.
- .3 At reglets wider than 10mm (0.4") and deeper than 19mm (0.75") provide polyethylene backer rod, 25% wider than joint width, and insert into back of reglet before sealant application.

### 3.4 FINISH

- .1 After installation, touch-up and repair minor surface damage and scratches to finish surfaces of metal components with colour matched paint in accordance with manufacturer's instructions.
  - .1 Remove dirt, debris, and other foreign deposits from visible surfaces of metal work in accordance with metal manufacturer's cleaning instructions.
  - .2 Remove stains, caulking, and adhesives from contaminated surfaces.
  - .3 Post paint all exposed metal and metal edges exposed due to cutting or grinding.
- .2 Finished surfaces of formed metal work to be colour matched, free of damage and dents, and free of visual impairments caused by oil canning, bending, twisting, or other distortions.
  - .1 Finished product with visual appearance impaired or diminished by changes in colour between sheets, dents, distortions, or oil canned surfaces will be rejected.
  - .2 Remove and replace damaged, defaced, contorted, or otherwise defective work.

### 3.5 SEALANTS

- .1 Apply sealant to provide a continuous waterproof seal at all open sheet metal joints, reglets, gum joints, and where shown on drawings to Section 07 92 00.

### 3.6 FIELD QUALITY CONTROL

- .1 Field Observation and Testing: Cooperate with Observer and afford all necessary facilities required to permit construction review and observation during performance of Work.
  - .1 Act immediately on instructions given by Observer.
  - .2 When required or reasonably directed by Observer, make assembly cut-outs and component samples at Observer identified locations. Restore assembly and make good at no additional cost to Owner.
  - .3 Promptly share and provide Observer with a copy of written reports and instructions given to Contractor from manufacturer and warranty holder pertaining to installation and observation work on this project.
    - .1 Manufacturer may copy project related communication regarding installation work directly to Observer.

### 3.7 CLEANING

- .1 Remove daily surplus materials and debris resulting from work of this section and at completion.
- .2 Lightly drag a magnetic bar, without damage to surfaces, across work area and grounds to find and remove discarded fasteners and sharp metal debris.

**END OF SECTION - 07 62 00**



## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 02 41 19 – Selective Demolition & Removal
- .2 Section 07 52 16 – SBS Modified Bitumen Membrane Roofing
- .3 Section 07 62 00 – Prefinished Sheet Metal Flashing & Trim

### **1.2 REFERENCES**

Latest edition of all listed references to apply:

- .1 ASTM C920 – Elastomeric Joint Sealants
- .2 CAN/CGSB-19.13 – Sealing Compound, One-component, Elastomeric, Chemical Curing
- .3 Sealants: Professionals' Guide, Sealant, Waterproofing and Restoration Institute
- .4 SWRI (Sealant, Waterproofing and Restoration Institute) – Sealant and Caulking Guide Specification

### **1.3 QUALITY OBSERVATION**

- .1 Observation of work will be carried out by designated Rooftop Quality Observer.
- .2 Prior to mobilizing on site, prepare and install sealant samples for adhesion testing, a minimum of two (2) samples for each substrate combination, according to manufacturers written guidelines. Test sealant in contact with samples of materials to be caulked to ensure that proper adhesion will be obtained and no staining of material will result. Testing to be completed prior to mobilization on site. Do not proceed with Work until samples have been approved.
- .3 Adhesion tests on new sealant will be performed at random locations at discretion of Owner's representative. Any work that is found to be sub-standard, is to be removed and replaced at no cost to Owner. Contractor is to assist with sealant adhesion tests as directed.
- .4 Execute Work of this Section by Subcontractors approved by manufacturers of materials incorporated in Work; who has equipment, adequate for Project, and skilled tradesmen to perform it expeditiously; and is known to have been responsible for satisfactory installations similar to that specified during a period of at least immediate past five years.
- .5 Remove sealant and re-caulk disapproved joints.
- .6 Approved joints will establish minimum acceptable quality of workmanship and will serve as standard by which subsequent Work will be compared for Acceptance.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact.
- .2 Protect from freezing, moisture, water and contact with ground or floor.

### **1.5 ENVIRONMENTAL AND SAFETY REQUIREMENTS**

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labeling and provision of material safety data sheets acceptable to local Labour regulations.

- .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

## 1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Place materials defined as hazardous or toxic waste in designated containers.
- .2 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .3 Dispose of surplus chemical and finishing materials in accordance with federal regulations.
- .4 Fold up metal banding, flatten, and place in designated area for recycling.
- .5 Use trigger operated spray nozzles for water hoses.
- .6 Return solvent and oil soaked rags for contaminant recovery and laundering or for proper disposal.
- .7 Use least toxic sealants, adhesives, sealers, and finishes necessary to comply with requirements of this section.
- .8 Close and seal tightly all partly used sealant containers and store protected in well ventilated fire-safe area at moderate temperature.
- .9 Place used hazardous sealant tubes and other containers in areas designated for hazardous materials.

## PART 2 - PRODUCTS

### 2.1 SEALANT MATERIALS

- .1 Sealants and caulking compounds must:
  - .1 meet or exceed all applicable governmental and industrial safety and performance standards.
  - .2 be manufactured and transported in such a manner that all steps of process, including disposal of waste products arising therefrom, will meet requirements of all applicable governmental acts, by laws and regulations including.
- .2 Sealant and caulking compounds must be accompanied by detailed instructions for proper application so as to minimize health concerns and maximize performance, and information describing proper disposal methods.
- .3 Caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant to not be used in or near air handling units.

### 2.2 SEALANT MATERIAL DESIGNATIONS

- .1 Acceptable single component neutral cure silicone sealants for skylight related work include:
  - .1 CWS by Dow Corning; or
  - .2 795 by Dow Corning
- .2 Acceptable single component, moisture curing, polyurethane sealants for reglets and other roofing related flashing termination work include:

- .1 Dymonic by Tremco; or
- .2 CWS by Dow Corning
- .3 Butyl (for concealed skylight related sealant joints): Tremco Curtainwall Sealant or approved alternate.
- .4 Primers:
  - .1 Primers to be as recommended by sealant manufacturer.
- .5 Cleaners:
  - .1 Acceptable cleaners:
    - .1 Xylol
    - .2 Methyleneethylketone (MEK)
    - .3 Isopropyl Alcohol
  - .2 Surfaces to receive silicone sealants to not be cleaned with Xylol.
  - .3 All substrate materials to be cleaned with compatible cleaners.
- .6 Preformed Compressible and Non-Compressible back-up materials.
  - .1 Polyethylene:
    - .1 Extruded closed cell foam backer rod.
    - .2 Size: oversize 30 to 50 %.
  - .2 Bond Breaker Tape.
    - .1 Polyethylene bond breaker tape.
- .7 Compatibility: All materials in a sealant system to be compatible with each other, with substrate and any coating or waterproofing to be installed. sealants used with elastomeric coating or waterproofing systems must be approved by coating or waterproofing manufacturer.

## 2.3 JOINT PRIMER

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant. Primer as recommended by sealant manufacturer.

## PART 3 - EXECUTION

### 3.1 PROTECTION

- .1 Protect existing facades from staining or contamination.
- .2 Protect public from falling debris during installation.
- .3 At end of each day's work or when stoppage occurs due to inclement weather, provide protection for completed work and materials out of storage. At no time shall unsealed joints be left open. If protection is required, then entire drop/bay to be adequately protected.

### 3.2 EXAMINATION

- .1 Before commencing Work, verify that joint configuration and surfaces have been provided as specified under Work of other Sections to meet intent of sealant Specification, that joint conditions will not adversely affect execution, performance or quality of completed Work and that they can be put into acceptable condition by means of preparation specified in this Section. Verify Site conditions together with manufacturer's representative of sealant to be applied.
- .2 Examine existing conditions and substrates upon which work of this section is dependent. Report to Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assuming full responsibility for finished condition of work.
- .3 Ascertain that sealers applied to sealant substrates are compatible with sealant used and that full bond between sealant and substrate is attained. Request samples of sealed or coated substrate from their fabricators for testing of compatibility and bond if necessary.
- .4 Examine sealant configuration for width and depth. Depth of joint should be 1/2 joint width with a minimum depth of 6mm (0.25") and a maximum depth of 13mm (0.5") unless specified otherwise. For fillet joints, a minimum of 6mm (0.25") adhesion between sealant and substrate must be achieved on both sides of joint unless specified otherwise.
- .5 Defective work resulting from application to unsatisfactory joint conditions will be considered responsibility of those performing work of this section.

### 3.3 SURFACE PREPARATION

- .1 Prepare surfaces in accordance with manufacturer's directions.
- .2 Before any sealant repairs are made, type of existing sealant to be determined. If uncertain as to type, then a sealant manufacturer technical representative to be contacted to confirm type. Only sealant compatible with existing to be installed as part of repairs. Urethane based sealants are not to be applied over existing silicone sealants.
- .3 Where existing, remove sealant completely. In no case shall new sealant be applied over old. In addition:
  - .1 Remove existing sealants, dust, oil, grease, oxidation, mill scale, coatings and all other loose material by cutting, brushing, scrubbing, scraping and/or grinding. In no case, however, shall components be damaged during surface preparation.
  - .2 Clean substrates with recommended solvent cleaner. Apply solvent with a clean cloth, pad or soft paper towel. Applicator cloth or towel to not leave fiber residue on substrate surface. Surface should be wiped clean and dried with a second clean cloth to ensure removal of contaminants. If substrate surfaces is still not clean, repeat procedures as needed. Change cloths frequently to prevent depositing contaminants from cloth onto substrate surface.
  - .3 Use method of surface preparation suitable for substrate, as recommended by sealant manufacturer and that does not damage existing finishes.
- .4 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .5 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .6 Ensure joint surfaces are dry and frost free.

- .7 Remove loose particles present or resulting from routing by sweeping particles out with a dry brush, blowing out joints with oil free compressed air or by vacuuming joints prior to solvent cleaning.

### **3.4 PRIMING**

- .1 Where necessary to prevent staining or for neat appearance, mask adjacent surfaces prior to priming and caulking.
- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.
- .3 Use only primer approved by sealant manufacturer for particular installation, applying in strict accordance with manufacturers printed recommendations.
- .4 Always pour primers onto rag or brush, do not dip rag or brush into container.
- .5 Prime only as much area that can be packed and caulked in a single day.
- .6 Do not apply excess primer, and apply primer only to areas which it will be contacted by sealant.

### **3.5 BACKUP MATERIAL**

- .1 Apply bond breaker tape where installation of backer rod is not possible, three point adhesion needs to be eliminated or throat to width ratio needs to be created as per manufacturers recommendations.
- .2 When using backing material comprised of tubular or rod stock, avoid lengthwise stretching of material. Do not twist or braid backer material.
- .3 Provide a stiff blunt-surfaced wood or plastic installation tool, having shoulders designed to ride on finished surface and a protrusion of required dimensions to assure a uniform depth of backup material below sealant. Do not puncture exterior skin or surface of backer material. A screwdriver is prohibited for use on this project.
- .4 Using approved tool, smoothly and uniformly place backup material to depth indicated on drawings or otherwise required, compressing backer material 25% to 50% and securing a positive fit.
- .5 Install backing material to a depth to provide a caulked joint meeting depth requirement as set out in sealant manufacturer's specifications.

### **3.6 MIXING**

- .1 Mix materials in strict accordance with sealant manufacturer's instructions.

### **3.7 APPLICATION**

- .1 Sealant:
  - .1 Apply sealant in accordance with manufacturer's written instructions.
  - .2 Mask edges of joint where irregular surface or sensitive joint border exist to provide neat joint.
  - .3 Apply sealant in continuous beads.
  - .4 Apply sealant using gun with proper size nozzle.

- .5 Ensure that new sealant is adhered to substrates a minimum of 6 to 10 mm at each side of joint.
  - .6 Use sufficient pressure to fill voids and joints solid.
  - .7 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
  - .8 Tool exposed surfaces before skinning begins to give slightly concave shape. Tooling to be performed by proper metal or wood tool. Finger tooling joints will not be accepted.
  - .9 Remove excess compound promptly as work progresses and upon completion.
- .2 Curing:
- .1 Cure sealants in accordance with sealant manufacturer's instructions.
  - .2 Do not cover up sealants until proper curing has taken place.

### **3.8 CLEAN-UP**

- .1 Clean adjacent surfaces immediately and leave work neat and clean.
- .2 Remove excess and droppings, using recommended cleaners as work progresses.
- .3 Remove masking tape after initial set of sealant.

**END OF SECTION - 07 92 00**

## **PART 1. - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 07 92 00 - Joint Sealants.
- .2 Section 08 71 00 - Door Hardware.

### **1.2 REFERENCES**

- .1 American Society for Testing and Materials (ASTM)
  - .1 ASTM A653/A653M, Specification for Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot Dip Process.
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-1.181, Ready-Mixed Organic Zinc-Rich Coating.
  - .2 CGSB 41-GP-19Ma, Rigid Vinyl Extrusions for Windows and Doors.
- .3 Canadian Standards Association (CSA)
  - .1 G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
  - .2 CSA W59, Welded Steel Construction (Metal Arc Welding).
- .4 Canadian Steel Door Manufacturers' Association, (CSDMA).
  - .1 CSDMA, Specifications for Commercial Steel Doors and Frames.
  - .2 CSDMA, Recommended Selection and Usage Guide for Commercial Steel Doors.
- .5 National Fire Protection Association (NFPA)
  - .1 NFPA 80, Standard for Fire Doors and Fire Windows.
  - .2 NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
- .6 Underwriters' Laboratories of Canada (ULC)
  - .1 CAN4-S104M, Fire Tests of Door Assemblies.
  - .2 CAN4-S105M, Fire Door Frames Meeting the Performance Required by CAN4-S104.
  - .3 CAN/ULC-S701, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
  - .4 CAN/ULC-S702, Thermal Insulation, Mineral Fibre, for Buildings.
  - .5 CAN/ULC-S704, Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

### **1.3 DESIGN REQUIREMENTS**

- .1 Design door assembly to withstand minimum 1,000,000 swing cycles in accordance with ANSI A151.1, with no failure of any design features of the door.
- .2 Design exterior frame assembly to accommodate to expansion and contraction when subjected to minimum and maximum surface temperature of -35°C to 35°C.
- .3 Maximum deflection for exterior steel entrance screens under wind load of 1.2 kPa not to exceed 1/175th of span.
- .4 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104 and NFPA 252 for ratings specified or indicated.

- .5 Provide fire labelled frames for openings requiring fire protection ratings. Test products in conformance with CAN4-S104 and NFPA 252 and listed by nationally recognized agency having factory inspection services and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.

#### **1.4 SUBMITTALS**

- .1 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, glazed, louvred, arrangement of hardware and fire rating and finishes.
- .2 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings and reinforcing firerating and finishes.
- .3 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.
- .4 Submit one 300 x 300 mm top corner sample of each type door.
- .5 Submit one 300 x 300 mm corner sample of each type of frame.
  - .1 Show butt cut-out, glazing stops.

#### **1.5 DELIVERY STORAGE AND HANDLING**

- .1 Deliver, store, handle and protect doors and frames in accordance with the product requirements and manufacture instructions.
- .2 Deliver, handle and store doors and frames at the job site in such a manner as to prevent damage.
- .3 Store doors and frames under cover with doors stored in a vertical position on blocking, clear of floor and with blocking between doors to permit air circulation.

#### **1.6 QUALITY ASSURANCE**

- .1 Conform to requirements to ANSI A117.1
- .2 Company specializing in manufacturing products specified with a minimum of five (5) years documented experience.

#### **1.7 WARRANTY**

- .1 Provide a written warranty for work of this section from manufacturer for failure due to defective materials and from contractor for failure due to defective installation workmanship, for one (1) year respectively from the date of Substantial Completion.

## **PART 2. - PRODUCTS**

### **2.1 MATERIALS**

- .1 Hot dipped galvanized steel sheet: to ASTM A653/A653M, ZF75, minimum base steel thickness in accordance with CSDMA Table 1 - Thickness for Component Parts.
- .2 Reinforcement channel: to CSA G40.20/G40.21, Type 44W, coating designation to ASTM A653/A653M, ZF75.

### **2.2 DOOR CORE MATERIALS**

- .1 Stiffened: face sheets welded insulated core.
  - .1 Expanded polystyrene: CAN/ULC-S701, density 16 to 32 kg/m<sup>3</sup>.



- .2 Polyurethane: to CAN/ULC-S704 rigid, modified polyisocyanurate, closed cell board. Density 32 kg/m<sup>3</sup>.
- .2 Temperature rise rated (TRR): core composition to limit temperature rise on unexposed side of door to 250°C at 60 minutes. Core to be tested as part of a complete door assembly, in accordance with CAN4-S104, ASTM E152 or NFPA 252, covering Standard Method of Tests of Door Assemblies and listed by nationally recognized testing agency having factory inspection service.
- .3 Thermal Insulation material must:
  - .1 Not require being labelled as poisonous, corrosive, flammable or explosive under the Consumer Chemical and Container Regulations of the Hazardous Products Act.
  - .2 Be manufactured using a process that uses chemical compounds with the minimum zone depletion potential (ODP) available.

### 2.3 ADHESIVES

- .1 Polystyrene and polyurethane cores: heat resistant, epoxy resin based, low viscosity, contact cement.

### 2.4 PRIMER

- .1 Touch-up prime CAN/CGSB-1.181.

### 2.5 ACCESSORIES

- .1 Door silencers: single stud rubber/neoprene type.
- .2 Exterior top and bottom caps steel.
- .3 Fabricate glazing stops as formed channel, minimum 16 mm height, accurately fitted, butted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws.
- .4 Door bottom seal: Section 08 71 00 – Door Hardware.
- .5 Metallic paste filler: to manufacturer's standard.
- .6 Fire labels: metal riveted.
- .7 Sealant: Section 07 92 00 – Joint Sealants.
- .8 Provide low expanding, single component polyurethane foam sealant installed at head and jamb perimeter of door frame for sealing to building air barrier, vapour retarder and door frame. Foam sealant width to be adequate to provide required air tightness and vapour diffusion control to building air barrier and vapour retarder foam interior..
- .9 Glazing: Section 08 80 00 – Glazing.
- .10 Make provisions for glazing as indicated and provide necessary glazing stops.
  - .1 Provide removable stainless steel glazing beads for dry glazing of snap-on type.
  - .2 Design exterior glazing stops to be tamperproof.
- .11 Finish Painting: to Section 09 91 13 – Exterior Painting and Section 09 91 23 – Interior Painting.

### 2.6 FRAMES FABRICATION GENERAL

- .1 Fabricate frames in accordance with CSDMA specifications.
- .2 Fabricate frames to profiles and maximum face sizes as indicated.
- .3 Exterior frames: 1.2 mm welded, thermally broken type construction.
- .4 Interior frames: 1.2 mm welded type construction.

- .5 Blank, reinforce, drill and tap frames for mortised, template hardware, and electronic hardware using templates provided by finish hardware supplier. Reinforce frames for surface mounted hardware.
- .6 Protect mortised cut-outs with steel guard boxes.
- .7 Prepare frame for door silencers, 3 for single door, 2 at head for double door.
- .8 Manufacturer's nameplates on frames and screens are not permitted.
- .9 Conceal fastenings except where exposed fastenings are indicated.
- .10 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.
- .11 Insulate exterior frame components with polyurethane insulation.

## **2.7 FRAME ANCHORAGE**

- .1 Shim and anchor new doors in accordance with CAN/CSA A440.4.
- .2 Provide appropriate anchorage to floor and wall construction.
- .3 Locate each wall anchor immediately above or below each hinge reinforcement on hinge jamb and directly opposite on strike jamb.
- .4 Provide 2 anchors for rebate opening heights up to 1520 mm and 1 additional anchor for each additional 760 mm of height or fraction thereof.
- .5 Locate anchors for frames in existing openings not more than 150 mm from top and bottom of each jambs and intermediate at 660 mm o.c. maximum.

## **2.8 FRAMES: WELDED TYPE**

- .1 Welding in accordance with CSA W59.
- .2 Accurately mitre or mechanically joint frame product and securely weld on inside of profile.
- .3 Cope accurately and securely weld butt joints of mullions, transom bars, centre rails and sills.
- .4 Grind welded joints and corners to a flat plane, fill with metallic paste and sand to uniform smooth finish.
- .5 Securely attach floor anchors to inside of each jamb profile.
- .6 Weld in 2 temporary jamb spreaders per frame to maintain proper alignment during shipment.

## **2.9 DOOR FABRICATION GENERAL**

- .1 Doors: swing type, flush, with provision for glass and/or louvre openings as indicated.
- .2 Exterior doors: insulated, hollow steel construction. Interior doors: honeycomb hollow steel construction.
- .3 Fabricate doors with longitudinal edges locked seam. Seams: grind welded joints to a flat plane, fill with metallic paste filler and sand to a uniform smooth finish.
- .4 Doors: manufacturers' proprietary construction, tested and/or engineered as part of a fully operable assembly, including door, frame, gasketing and hardware in accordance with ASTM E330.
- .5 Blank, reinforce, drill doors and tap for mortised, templated hardware and electronic hardware.
- .6 Factory prepare holes 12.7 mm diameter and larger except mounting and through-bolt holes, on site, at time of hardware installation.

- .7 Reinforce doors where required, for surface mounted hardware. Provide flush steel top caps to exterior doors. Provide inverted, recessed, spot welded channels to top and bottom of interior doors.
- .8 Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.
- .9 Provide fire labelled doors for those openings requiring fire protection ratings, as scheduled. Test such products in strict conformance with CAN4-S104 ASTM E152 NFPA 252 and list by nationally recognized agency having factory inspection service and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.
- .10 Manufacturer's nameplates on doors are not permitted.

## **2.10 HOLLOW STEEL CONSTRUCTION**

- .1 Form each face sheet for exterior doors from 1.2 mm sheet steel.
- .2 Form each face sheet for interior doors from 1.2 sheet steel.
- .3 Reinforce doors with vertical stiffeners, securely welded to each face sheet at 150 mm on centre maximum.
- .4 Fill voids between stiffeners of exterior doors with insulation as specified.
- .5 Fill voids between stiffeners of interior doors with honeycomb core.

## **2.11 THERMALLY BROKEN DOORS AND FRAMES**

- .1 Fabricate thermally broken doors by using insulated core and separating exterior parts from interior parts with continuous interlocking thermal break.
- .2 Thermal break: rigid polyvinyl chloride extrusion conforming to CGSB 41-GP-19Ma.
- .3 Fabricate thermally broken frames separating exterior parts from interior parts with continuous interlocking thermal break.
- .4 Apply insulation.

# **PART 3. - EXECUTION**

## **3.1 INSTALLATION GENERAL**

- .1 Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise.
- .2 Install doors and frames to CSDMA Installation Guide.

## **3.2 FRAME INSTALLATION**

- .1 Set frames plumb, square, level and at correct elevation.
- .2 Secure anchorages and connections to adjacent construction.
- .3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.
- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
- .5 Caulk perimeter of frames between frame and adjacent material.
- .6 Maintain continuity of air barrier and vapour retarder.

### **3.3 DOOR INSTALLATION**

- .1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 00 - Door Hardware.
- .2 Provide even margins between doors and jambs and doors and finished floor as follows.
  - .1 Hinge side: 1.0 mm.
  - .2 Latch side and head: 1.5 mm.
  - .3 Finished floor: 13 mm.
- .3 Adjust operable parts for correct function.
- .4 Install louvres.

### **3.4 FINISH REPAIRS**

- .1 Touch up with primer finishes damaged during installation.
- .2 Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

### **3.5 COMMISSIONING**

- .1 Contractor to instruct maintenance personnel in operation and maintenance of doors and hardware.
- .2 Confirm operation and function for all doors and hardware.
- .3 Commissioning will be witnessed by Owner's Representative and Certificate will be signed by Contractor and Owner's Representative.

**END OF SECTION - 08 11 00**

## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 08 11 00 - Metal Doors & Frames.

### **1.2 REFERENCES**

- .1 American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA)
  - .1 ANSI/BHMA A156.1, American National Standard for Butts and Hinges.
  - .2 ANSI/BHMA A156.2, Bored and Preassembled Locks and Latches.
  - .3 ANSI/BHMA A156.3, Exit Devices.
  - .4 ANSI/BHMA A156.4, Door Controls - Closers.
  - .5 ANSI/BHMA A156.5, Cylinders and Input Devices for Locks.
  - .6 ANSI/BHMA A156.6, Architectural Door Trim.
  - .7 ANSI/BHMA A156.8, Door Controls - Overhead Stops and Holders.
  - .8 ANSI/BHMA A156.12, Interconnected Locks and Latches.
  - .9 ANSI/BHMA A156.13, Mortise Locks and Latches Series 1000.
  - .10 ANSI/BHMA A156.14, Sliding and Folding Door Hardware.
  - .11 ANSI/BHMA A156.15, Release Devices - Closer Holder, Electromagnetic and Electromechanical.
  - .12 ANSI/BHMA A156.16, Auxiliary Hardware.
  - .13 ANSI/BHMA A156.17, Self-closing Hinges and Pivots.
  - .14 ANSI/BHMA A156.18, Materials and Finishes.
  - .15 ANSI/BHMA A156.19, Power Assist and Low Energy Power - Operated Doors.
  - .16 ANSI/BHMA A156.21, Thresholds.
  - .17 ANSI/BHMA A156.22, Door Gasketing and Edge Seal Systems.
  - .18 ANSI/BHMA A156.26, Continuous Hinges.
  - .19 ANSI/BHMA A156.28, Keying Systems.
  - .20 ANSI/BHMA A156.31, Electronic Strikes.
- .2 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA)
  - .1 CSDFMA Canadian Metric Guide for Steel Doors and Frames (Modular Construction).
  - .2 CSDFMA Recommended Dimensional Standards for Commercial Steel Doors and Frames.

### **1.3 SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and data sheet.
- .2 Samples:
  - .1 Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.

- .2 After approval samples will be returned for incorporation in the Work.
- .3 Hardware List:
  - .1 Submit contract hardware list.
  - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
- .4 Manufacturer's Instructions:
  - .1 Submit manufacturer's installation instructions.
- .5 Closeout Submittals
  - .1 Provide operation and maintenance data for door closers, locksets, door holders electrified hardware and fire exit hardware for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

#### **1.4 MAINTENANCE MATERIALS**

- .1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Supply two sets of wrenches for door closers, locksets and fire exit hardware.

#### **1.5 WARRANTY**

- .1 Provide a written manufacturer's warranty for work of this Section for failure due to defective materials for ten (10) years, dated from substantial completion certificate.
- .2 Provide a written Contractor's warranty for work of this Section for failure due to defective installation workmanship for one (1) year, dated from submittal completion certificate.

#### **1.6 QUALITY ASSURANCE**

- .1 Regulatory Requirements:
  - .1 Hardware for doors in fire separations and exit doors certified by a Canadian Certification Organization accredited by Standards Council of Canada.
- .2 Only products certified in accordance with ANSI/BHMA standards are acceptable. Items that are equal in design, function and quality will be accepted upon approval of the Owner's Representative.
- .3 Only recognized contract hardware distributors will be considered for the work of this section. The distributor shall have on staff a qualified Architectural Hardware Consultant recognized by the Door and Hardware Institute or a person with equivalent qualifications to assist installers and direct detailing, processing and delivery of material, and certify installation acceptance.
- .4 Upon completion of finish hardware installation, hardware supplier shall inspect work and shall certify in writing that all items and their installation are in accordance with requirements of Contract Documents and are functioning properly.

#### **1.7 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, store, handle and protect materials in accordance with the product requirements and manufacture instructions.
- .2 Store finishing hardware in locked, clean and dry area.
- .3 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.

## 1.8 MAINTENANCE SERVICE

- .1 Provide maintenance service for one year during warranty period to maintain all barrier free entrance automatic operators as follows:
  - .1 Qualified service personal approved by manufacturer of operators.
  - .2 Site inspection every three months will all necessary adjustment made during this visit. Separate warranty service calls, if required, will only qualify as an inspection if time of call is close to the three month intervals.
  - .3 Make detailed reports of each visit and copy to Owner and Engineer.
  - .4 Cost of this service will be included as part of this Section and is not covered by any allowance amount.

## PART 2 - PRODUCTS

### 2.1 HARDWARE ITEMS

- .1 Only door locksets and latches listed on ANSI/BHMA Standards list are acceptable for use on this project.
- .2 Use one manufacturer's products only for similar items.

### 2.2 DOOR HARDWARE

- .1 Locks and latches:
  - .1 Bored and preassembled locks and latches: to ANSI/BHMA A156.2, 4000 bored lock, grade 1, designed for function and keyed as stated in Hardware Schedule.
  - .2 Mortise locks and latches: to ANSI/BHMA A156.13, series 1000 mortise lock, designed for function and keyed as stated in Hardware Schedule.
  - .3 Lever handles : design as indicated in hardware groups.
  - .4 Roses: round.
  - .5 Normal strikes: box type, lip projection not beyond jamb.
  - .6 Cylinders: key into keying system as directed.
  - .7 All corresponding cylinders to be removable.
  - .8 Finished as indicated in Hardware Groups.
- .2 Butts and hinges:
  - .1 Butts and hinges: to ANSI/BHMA A156.1, designated by letter A and numeral identifiers, followed by size and finish, listed in Hardware Schedule.
  - .2 Interior hinges of steel, unless otherwise indicated.
  - .3 Continuous hinges shall be heavy duty as indicated, full height, complete with installation aids and fasteners to suit door and frame conditions. Hinge to have access to electrical items without removing hinge.
  - .4 Quantity, size and width of hinges in accordance with manufacturer's recommendations and ASNI/BHMA 156.1.
- .3 Exit devices:
  - .1 To ANSI/BHMA A156.3, function, grade and finish as per schedule. Rim type with push pad design.
- .4 Door Closers and Accessories:

- .1 Door controls (closers): to ANSI/BHMA A156.4, designated by letter C and numeral identifiers listed in Hardware Schedule, size in accordance with ANSI/BHMA A156.4. Table A1.
- .2 Closers of narrow, slim line design complete with backcheck, rack and pinion hydraulic action.
- .3 Closers equipped with full cover, as noted in Hardware Groups, complete with secure and concealed mounting screws
- .4 Adapter plates for added reinforcing shall be added to any opening if required to suit field conditions or door design.
- .5 Closers shall include all necessary arm brackets, cushion arm supports and blade stop spacers to suit door swing, frame reveals or stop conditions.
- .6 Closers capable of field adjustments of at least fifteen (15) percent.
- .7 Finish as indicated in Hardware Groups.
- .5 Door Operators:
  - .1 Power-operated pedestrian doors: to ANSI/BHMA A156.10.
  - .2 Complete with all components including operator housing, power operator, electronic control, soft start, switching networks, and all connecting hardware.
  - .3 Design intent and function of opening as indicated in Hardware Groups. Supplier to include additional components and power supplies required to properly operate all hardware devices, door control devices, remote control devices, complete with any special cables or wirings to connect all parts.
  - .4 Operator housing shall be complete with finished end caps prepared for mounting to door frame.
  - .5 Operator housing shall be factory assembled with all necessary components for proper operation and switching. Relays, wiring harness and other components shall be plug-in type.
  - .6 Operator controls shall include adjustable time delay, safe-swing circuit as well as provision for accessories as detailed in Hardware Groups.
  - .7 Complete unit shall be mounted with provisions for easy servicing or replacement without removing the door or frame.
  - .8 All wiring shall be of shielded type with proper number and gauge of conductor wires to install all components as specified.
  - .9 Installation of operators shall be carried out by manufacturer's certified and authorized personnel.
- .6 Power Supplies:
  - .1 To ANSI/BHMA 156.19, designated by numerical identifiers listed in Hardware Groups.
  - .2 Shall be concealed in ceiling space of suitable adjacent area.
  - .3 Shall interface with all electrical security components and supplied with all relays and devices to operate as per Hardware Groups.
  - .4 When key switch is used, it will operate as per hardware notes and reset the power supply.
- .7 Auxiliary locks and associated products: to ANSI/BHMA A156.5, designated by letter E and numeral identifiers listed in Hardware Schedule.
  - .1 Key into keying system as noted.
- .8 Architectural door trim: to ANSI/BHMA A156.6, designated by letter J and numeral identifiers listed in Hardware Schedule.
  - .1 Door protection plates: 1.27 mm thick stainless steel, finished to BMHA 630.



- .2 Push plates: 1.27 mm thick stainless steel finished to BMHA 630.
- .3 Push/Pull units: type stainless steel finished to BMHA 630.
- .4 Fastened with through bolts or concealed bolts depending on application.
- .5 Where pull has back plate, fasteners will be countersunk and bevelled with no sharp edges.
- .6 Where bolts cannot be concealed under the push plate they shall have a grommet washer finished to match other hardware.
- .9 Auxiliary hardware: to ANSI/BHMA A156.16, designated by letter L and numeral identifiers listed in Hardware Schedule.
  - .1 Combination stop and holder, floor mounted: finished to BMHA 626.
  - .2 Surface bolt lever extension flush bolt: finish to BMHA 626.
- .10 Door bottom seal: heavy duty, door seal of extruded aluminum frame and hollow closed cell neoprene weather seal, surface mounted with drip cap closed ends, clear anodized finish.
- .11 Thresholds:
  - .1 To ANSI/BHMA A156.21 extruded aluminum mill finish, serrated surface, with lip and vinyl door seal insert, thermally broken.
  - .2 Thresholds of aluminum material. Provide 50 mm longer than opening to allow fitting on site.
  - .3 When mullion is used, increase length of threshold to fit around mullion.
  - .4 Fasteners of countersink type suitable to properly install to floor/sill conditions. Supply complete with screw anchors.
- .12 Weatherstripping:
  - .1 Head and jamb seal:
    - .1 Extruded aluminum frame and solid closed cell neoprene insert, clear anodized finish.
- .13 Astragal: overlapping, extruded aluminum frame with vinyl insert, finished to match doors.

### **2.3 KEY CABINET**

- .1 Provide one wall mounted steel key cabinet with capacity for 1.5 times the number of keys with an indexed key control system to ANSI/BHMA A156.5.

### **2.4 FASTENINGS**

- .1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.
- .2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
- .3 Exposed fastening devices to match finish of hardware.
- .4 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners.
- .5 Use fasteners compatible with material through which they pass.

### **2.5 KEYING**

- .1 Doors, padlocks and cabinet locks to be master keyed as directed. Prepare detailed keying schedule in conjunction with Owner's Representative and owner.

- .2 Provide keys in triplicate for every lock in this Contract.
- .3 Provide six master keys for each MK or GMK group. Allow for six (6) levels of sub master keying.
- .4 Stamp keying code numbers on keys and cylinders.
- .5 Provide construction cores.
- .6 Provide all permanent cores and keys to Owner's Representative.
- .7 Supply fifty (50) blanks for each sub master group used.

## 2.6 FINISHES

- .1 Following finishes are indicated in hardware groups.

BHMA	CAN MATERIAL	FINISH
626	C26D Brass/Bronze	Satin Chrome
628	C28 Aluminum	Satin Alum, Anodized
630	C32D Stainless Steel	Satin Stainless Steel
652	C26D Steel	Plated Satin Chrome
689	Al All	Painted Aluminum
	Alum Aluminum Mill Finish	
	TMDFF (to match door and frame finish).	

## 2.7 ABBREVIATIONS

ALD	Aluminum Door and Frame
ATMS STMS	Arm/strike To Template with Machine Screws
ASB	Arm Complete with Sex Bolts
BC	Back Check
C to C, C/L	Centerline to Centerline
Cyl	Cylinder (of a lock)
CMK	Construction Master Key
Deg.	Degree (of opening)
DEL	Delayed Action
FBB or BB	Ball bearing hinge

## PART 3 - EXECUTION

### 3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.
- .3 Furnish manufacturers' instructions for proper installation of each hardware component.

### 3.2 INSTALLATION

- .1 Install door hardware in accordance with manufacturer's instructions, using special tools and jigs. Fit accurately and apply securely. Ensure that hardware is installed correctly.
- .2 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.

- .3 No operating hardware shall be installed at a height of more than 1200 above the finished floor (NBC 3.4.6.16).
- .4 Installation to be done by a qualified tradesman. Technical assistance provide by door hardware supplier where required.
- .5 Closers shall be installed according to manufacturer's templates and installation instructions. Unless required otherwise, installation shall be on pull side of door. Outswing doors shall be on push side using top jamb or parallel arm installation.
- .6 Where closer or arm is installed on door, sex bolts will be used, finished to match other hardware.
- .7 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners. Plates drilled to accept through bolts will not be acceptable.
- .8 Where door stop contacts door pulls, mount stop to strike bottom of pull.
- .9 Install key control cabinet.
- .10 Use only manufacturer's supplied fasteners. Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.
- .11 Remove construction cores and locks when directed by Owner's Representative; install permanent cores and check operation of locks.
- .12 Installation of all Automatic Operator items to be performed by AAADM certified and manufacturer authorized personnel, including connections to hardware products installed by others.
- .13 Installation of Access Control items to be performed by manufacturer certified authorized personnel, including connections to hardware products installed by others.
- .14 Wiring Diagrams:
  - .1 Provide any special information, voltage requirements and wiring diagrams to other trades requiring such information.

### 3.3 EXAMINATION

- .1 Visit site prior to start of installation of hardware.
- .2 Visit will include examination of openings, site conditions and materials for conditions that prevent proper application of finish hardware.
- .3 Report to General Contractor, in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Commencement of installation will imply acceptance pf prepared work by others.

### 3.4 FIELD QUALITY CONTROL

- .1 Hardware contractor to have a qualified AHC representative from the manufacturer/supplier on site at Substantial Completion Inspection and at commissioning of the finished hardware. Cost of the visits to be included in contract.
- .2 Provide an inspection report 6 (six) months after Substantial Completion, completed by a qualified Architectural Hardware Consultant, to note any deficiencies. The inspection should include checking each lock against the key schedule to make sure the correct locks and cylinders are on the proper doors.
- .3 Fire Rated Door Assemblies On-Site Inspection:
  - .1 Upon completion of the installation, inspect each fire rated door assembly to confirm proper operation of its closing device, confirming it meets the criteria of NFPA 80.

- .2 Provide a written report to the Owner's Representative listing each fire rated door assembly for the project including:
  - .1 Each door number,
  - .2 An itemized list of hardware set components for each door opening, and
  - .3 Each door location in the facility.

### 3.5 ADJUSTING

- .1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.
- .2 Lubricate hardware, operating equipment and other moving parts.
- .3 Adjust door hardware to provide tight fit at contact points with frames.
- .4 Where hardware is found defective, repair or replace or correct as desired by inspection reports.

### 3.6 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacture's instructions.
- .3 Remove protective material from hardware items where present.
- .4 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

### 3.7 PROTECTION

- .1 All hardware shall be protected against damage from paint, plaster or other defacing materials. Whenever possible manufacturers protective covering when applied, shall not be removed until final project cleaning takes place. Material not protected by manufacture shall be covered or removed from door during painting or any other adjustments that can cause damage to hardware.

### 3.8 HARDWARE GROUPS

- .1 Provide hardware as specified in the previous articles in sets according to the following groups: ***(insert hardware groups)***.

### 3.9 DEMONSTRATION

- .1 Keying System Setup and Cabinet:
  - .1 Set up key control system with file key tags, duplicate key tags, numerical index, alphabetical index and key change index, label shields, control book and key receipt cards.
  - .2 Place file keys and duplicate keys in key cabinet on their respective hooks.
  - .3 Lock key cabinet and turn over key to Owner's Representative.
- .2 Designated Staff Briefing:
  - .1 Brief designated staff regarding:
    - .1 Proper care, cleaning, and general maintenance of projects complete hardware.
    - .2 Description, use, handling, and storage of keys.
    - .3 Use, application and storage of wrenches for door closers, locksets, and fire exit hardware.
- .3 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

**3.10 COMMISSIONING**

- .1 Site inspection or visit at Substantial Completion and training follow up and inspection at commissioning as directed by Owner's Representative.
- .2 Provide 1 (one) year warranty service.

**END OF SECTION**

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April 17, 2024

HRCE - Halifax Regional Centre for Education  
33 Spectacle Lake Drive  
Dartmouth, Nova Scotia B3B 1X7

**Re: Hazardous Building Materials Assessment (Management)**

Rockingstone Heights School, 1 Regan Drive, Halifax, NS  
Pinchin File: 336128.018

HRCE (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of Rockingstone Heights School located at 1 Regan Drive, Halifax, NS.

Pinchin performed the assessment between March 5 and March 7, 2024. The assessor was unaccompanied during the assessment. The assessment was completed outside of regular school hours when teachers and students were not present. The assessed area was only occupied by maintenance staff at the time of the assessment.

The objective of the assessment was to document the locations of specified hazardous building materials, evaluate their condition and develop corrective action plans as required. This assessment is only to be used for the purposes of long-term management and routine maintenance. The results of this assessment are not to be used for construction, renovation, demolition or project tendering purposes.

The **assessed area** consisted of all interior and exterior areas of the building accessible with a 6-foot ladder, excluding 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



## **1.0 RECOMMENDATIONS**

### **1.1 On-going Management and Maintenance**

The following recommendations regard on-going management and maintenance work involving the ACM identified.

#### *1.1.1 Asbestos*

Inspect all accessible confirmed and presumed ACM at reasonable intervals and update the written documentation annually, as required by provincial guidelines.

Update the asbestos inventory report for all new information obtained (i.e., new materials, change of condition, abatement performed).

Remove ACM before alteration or maintenance work if ACM may be disturbed. Follow appropriate asbestos precautions for the classification of work as per applicable regulations and guidelines.

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

#### *1.1.2 Lead*

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.

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

#### *1.1.3 Silica*

Disturbance of silica-containing products during maintenance activities 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 per applicable regulations and guidelines.

#### *1.1.4 PCBs*

When light fixtures are removed from service, 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. All ballasts that contain PCBs must be removed from service and disposed of by December 31, 2025.

## 1.2 Construction and Demolition

This assessment report does not provide sufficient detail to support renovation and demolition work. Therefore, perform a detailed intrusive assessment before building renovation or demolition operations. The assessment should include destructive testing (e.g., coring, removal of building finishes and components), and sampling of any other materials not tested (e.g., roofing materials, caulking, mastics).

## 2.0 BACKGROUND INFORMATION

### 2.1 Assessed Area Description Summary

Description Item	Details
Building Use	School
Floors Above Grade	Three
Floors Below Grade	0
Total Area (square feet)	47,202
Year of Construction	1974
Structure	Poured concrete foundation, Structural steel
Exterior Cladding	Brick
HVAC	Mechanical Room Air Handling Units, Boiler with radiators
Roof	Unknown (Not assessed)
Flooring	Vinyl floor tile, Vinyl sheet flooring, Ceramic/stone tile, Terrazzo
Wall and Ceiling Finishes	Drywall, Concrete block, Lay-in ceiling tiles

### 2.2 Existing Reports

#### 2.2.1 Review of Previous Reports

A report provided by HRCE pre-dated 2000 and was not utilized, based on significant regulatory changes since the report publication, and the likelihood that site conditions, including renovations, have resulted in significant changes for the reported information.

### 2.3 Inaccessible Locations

The following locations were not accessible during the assessment:



Location Number	Location Name, (Location No.)	Reason
82	Classroom	Locked and custodians did not have access

### 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 Confirmed and Presumed Report in Appendices V and VI.

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

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0001 ABC	Wall   Door   Caulking   Black	None Detected	No	60 LF	
<b>S0002 ABCDEFG</b>	<b>Ceiling, Wall   Drywall and joint compound</b>	<b>Chrysotile</b>	<b>Yes</b>	<b>18,344 SF</b>	
S0003 ABC	Other   Caulking   Yellow	None Detected	No	9 LF	
S0004 ABC	Other   Caulking   White	None Detected	No	11 LF	
S0005 ABC	Floor   Vinyl Floor Tile and Mastic   12" grey with black flecks	None Detected	No	35 SF	
<b>S0006 ABC</b>	<b>Ceiling   Ceiling Tiles (lay-in)   24" x 24" pinhole</b>	<b>Amosite</b>	<b>Yes</b>	<b>26,910 SF</b>	
S0007 ABC	Ceiling   Ceiling Tiles (lay-in)   24" x 24" pinhole and fleck	None Detected	No	790 SF	
<b>S0008 ABC</b>	<b>Floor   Vinyl Floor Tile and Mastic   12" brown with white streak</b>	<b>Chrysotile</b>	<b>Yes</b>	<b>2,118 SF</b>	<b>1</b>
<b>S0009 ABC</b>	<b>Floor   Vinyl Floor Tile and Mastic   12" white with blue flecks</b>	<b>None Detected</b>	<b>No</b>	<b>8,376 SF</b>	<b>2</b>



**Hazardous Building Materials Assessment (Management)**

Rockingstone Heights School, 1 Regan Drive, Halifax, NS  
 HRCE – Halifax Regional Centre for Education

April 17, 2024  
 Pinchin File: 336128.018

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0010 ABC	Piping   Parging Cement	Chrysotile	Yes	37 EA	
S0011 ABC	Mechanical Equipment   Heating Water Tank   Thermal Insulation	Chrysotile	Yes	1 EA	
S0012 ABC	Floor   Vinyl Sheet Flooring   Blue speckled	None Detected	No	310 SF	
S0013	Other   Sink   Mastic, Grey	None Detected	No	4 EA	
S0014 ABC	Floor   Vinyl Floor Tile and Mastic   12" tan with off white streak	Chrysotile	Yes	1,626 SF	3
S0015	Other   Sink   Mastic, White	None Detected	No	1 EA	
S0016 ABC	Floor   Vinyl Floor Tile and Mastic   12" off white with grey and white flecks	None Detected	No	1,336 SF	
S0017 ABC	Floor   Vinyl Floor Tile and Mastic   12" blue with white and blue flecks	None Detected	No	7,678 SF	2
S0018 ABC	Floor   Vinyl Floor Tile and Mastic   12" off white with grey flecks	None Detected	No	1,793 SF	
S0019 ABC	Floor   Vinyl Floor Tile and Mastic   12" off white with tan streak	Chrysotile	Yes	375 SF	3
S0020 ABC	Floor   Vinyl Floor Tile and Mastic   12" peach with white flecks	Chrysotile	Yes	345 SF	4
S0021 ABC	Floor   Vinyl Floor Tile and Mastic   12" yellow	None Detected	No	5 SF	
S0022 ABC	Wall   Door   Caulking   White	Chrysotile	Yes	80 LF	
S0023 ABC	Floor   Vinyl Floor Tile and Mastic   12" brown with white and dark brown flecks	None Detected	No	2,555 SF	
S0024	Other   Sink   Mastic, Gold	Chrysotile	Yes	1 EA	
S0025 ABC	Floor   Vinyl Floor Tile and Mastic   12" beige with tan streaks	Chrysotile	Yes	906 SF	3



**Hazardous Building Materials Assessment (Management)**

Rockingstone Heights School, 1 Regan Drive, Halifax, NS  
 HRCE – Halifax Regional Centre for Education

April 17, 2024  
 Pinchin File: 336128.018

Sample Number	Material Description	Type of Asbestos	Confirmed Hazard	Total Quantity Present	Material Specific Notes
S0026 ABC	Floor   Vinyl Floor Tile and Mastic   12" pink with white and brown flecks	None Detected	No	204 SF	
S0027 ABC	Floor   Vinyl Floor Tile and Mastic   12" light blue with black flecks	None Detected	No	1,320 SF	
S0028 ABC	Wall   Caulking   Black butyl tape	None Detected	No	12 LF	
<b>V9000</b>	<b>Floor   Vinyl Floor Tile and Mastic   12" Beige With White And Grey Flecks, 12" Brown, 12" Brown And White Flecks, 12" Off White With Brown And White Flecks, 12" Off White With Brown Flecks, 12" Peach, 12" Purple With Dark Purple Flecks</b>	<b>Confirmed Asbestos</b>	<b>Yes</b>	<b>124 SF</b>	<b>5</b>
V9500	Floor   Mortar   Ceramic tile thinset	Presumed Asbestos	Yes	120 SF	
V9500	Floor   Terrazzo   Pebble pattern	Presumed Asbestos	Yes	3,327 SF	
V9500	Floor   Vinyl Floor Tile and Mastic   12" Off White With Blue and Brown Flecks, 12" Orange With Dark Orange Flecks	Presumed Asbestos	Yes	4,900 SF	
V0000	Ceiling   Ceiling Tiles (lay-in)   24" x 24" pinhole and fissure, 24" x 24" dense pinhole	Non Asbestos	No		
V0000	Ceiling   Drywall (no compound)	Non Asbestos	No		
V0000	Floor   Vinyl Floor Tile and Mastic   12" Beige With Brown Marks, 12" Blue With White And Dark Blue Flecks, 12" Grey With Dark Grey And White Flecks, 12" Off White With Brown Fleck, 12" Purple With Dark Purple Flecks, 12" White With Light Grey And Grey Flecks	Non Asbestos	No		
V0000	Other   Silicone Caulking   Clear, Black, White, Grey	Non Asbestos	No		
V0000	Wall   Silicone Caulking   Brown, Clear, Grey	Non Asbestos	No		



### Material Specific Notes:

1. Mastic is asbestos-containing, and vinyl floor tiles are non-asbestos; however, due to the contamination of the vinyl tiles from the mastic, the tiles would be considered asbestos-containing for removal purposes.
2. Vinyl floor tiles are non-asbestos, but mastic is presumed to contain asbestos until future sampling is performed. Mastic was not present in all samples within a sample set.
3. Vinyl floor tiles are asbestos-containing, and mastic is non-asbestos.
4. Vinyl floor tiles are non-asbestos; however, the sampling also included asbestos-containing levelling compound (sample S0020C in Location 74). Mastic is presumed to contain asbestos until future sampling is performed. Mastic was not present in all samples within a sample set.
5. Vinyl floor tiles were presumed asbestos-containing based on the presence in areas of asbestos-containing vinyl floor tile or mastic.

### General Notes:

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 asbestos based on historical known use of asbestos. Sampling of these materials may be completed prior to disturbance.

Materials identified as Sample Number V9000 were observed to be present and were determined to contain asbestos based on previous analytical results, or labelling (e.g., Transite clearly labelled by the manufacturer).

Materials identified as Sample Number V0000 were determined to be non-asbestos based on the manufacture date and known end of use of asbestos in these products.

#### 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:

- Roofing felts and tar, mastics
- Floor levelling compound (where not sampled)
- Electrical components
- Refractory materials and insulations in boilers and stacks



- Insulation under metal clad boilers and vessels
- Mechanical packing, ropes, and gaskets
- Fire resistant doors
- Soffit and fascia boards
- Vibration dampers on HVAC equipment
- Ropes and gaskets in cast-iron bell and spigot joints
- Sealants on pipe threads

**3.2 Lead**

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

Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present
L0001	Wall   Concrete (precast)   Off white	0.0081%	No	40,005 SF
L0002	Wall   Concrete (precast)   Yellow	<0.0081%	No	19,407 SF
L0003	Wall   Concrete (precast)   Beige	<0.008%	No	754 SF
L0004	Ceiling   Drywall and joint compound   White	<0.008%	No	2,298 SF
L0005	Wall   Concrete (precast)   Black	0.049%	Yes	2,860 SF
L0006	Wall   Concrete (precast)   greyish blue	0.008%	No	2,510 SF
L0007	Wall   Concrete (precast)   Light grey	<0.0081%	No	840 SF
L0008	Wall   Drywall and joint compound   Tan	<0.0081%	No	120 SF
L0009	Wall   Concrete (precast)   Light green	<0.008%	No	2,786 SF
L0010	Wall   Concrete (precast)   Green	<0.0082%	No	742 SF
L0011	Wall   Concrete (precast)   Light teal	<0.008%	No	930 SF
L0012	Wall   Concrete (precast)   Dark blue	<0.008%	No	2,208 SF
L0013	Wall   Concrete (poured)   Pink	0.0094%	Yes	1,372 SF
L0014	Wall   Concrete (poured)   White	<0.0081%	No	2,380 SF
L0015	Wall   Concrete (precast)   Grey	<0.008%	No	2,040 SF
V9500	Floor   Concrete (poured)   Green		Yes	120 SF
V9500	Structure   Metal   Orange		Yes	5,974 SF
V9500	Wall   Concrete (poured)   Light purple, Blue, Dark grey		Yes	580 SF



Sample Number	Material Description	Concentration	Confirmed Hazard	Total Quantity Present
V9500	Wall   Drywall And Joint Compound   Blue paint, Teal paint, Purple		Yes	1,056 SF

**General Notes:**

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.

Paints containing lead less than 0.009% (90 mg/kg) is assumed to be insignificant.

Paints identified as Sample Number V9500 were observed to be present and have not been sampled and based on the construction of the building/equipment are assumed to contain lead. Sampling of these materials may be completed prior to disturbance.

**3.2.1 Lead Products and Applications**

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed Report for details on lead-products including their locations and quantities.

Sample Number	Material Description	Confirmed Hazard	Total Quantity Present
V9500	Batteries In Emer. Lights	Yes	47 EA

**General Notes:**

Items identified as Sample Number V9500 were observed to be present but could not be definitively determined to contain lead (e.g., inaccessible batteries).

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, lead shielding and flashing).

**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:

- Concrete
- Masonry and mortar
- Ceramic tiles and grout
- Refractory or ceramic materials
- Terrazzo

### 3.4 Mercury

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed 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	Notes
V0000	Light Fixture	No		
V0000	Thermostat	No	12 EA	

#### General Notes:

Items identified as Sample Number V0000 are items that historically may have contained mercury; however, have been visually identified as non-mercury types (e.g., LED lamps, digital or electric thermostats).

### 3.5 Polychlorinated Biphenyls

Refer to the Hazardous Material Summary / Sample Log and Confirmed and Presumed 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
P0001	Caulking   White	<0.5 mg/kg	No	80 LF
P0002	Caulking   Black	<0.5 mg/kg	No	60 LF
V0000	Caulking		No	
V0000	Light Ballasts		No	

#### General Notes:

Materials identified as Sample Number V0000 were determined to be non-PCB based on previous analytical results, the manufacture date and regulated restrictions of PCBs. It can also include items that





historically may have contained PCBs; however, have been visually identified as non-PCB types (e.g., LED light fixtures).

### 3.5.1 Excluded PCB Materials

PCBs are known to be present in several materials and equipment which were not assessed or sampled. The following materials, where found, should be presumed to contain PCBs until sampling proves otherwise.

- Capacitors within or associated with electrical equipment
- Caulking and sealants (except where sampled)
- Paints

## 4.0 METHODOLOGY

Pinchin conducted a room-by-room assessment (rooms, corridors, service areas, exterior, etc.) to identify the hazardous building materials as defined in the scope.

The assessment was limited to non-intrusive testing. Concealed spaces such as those above solid ceilings and within shafts and pipe chases were accessed via existing access panels only. Destructive testing of flooring was not conducted (under carpets or multiple layers of flooring). Demolition of walls, solid ceilings, structural items, interior finishes or exterior building finishes, to determine the presence of concealed materials was not conducted. Sampling of roofing materials was not conducted.

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. Nova Scotia Occupational Safety General Regulation (N.S. Reg. 53/2013).
2. A Guide to Removal of Friable Asbestos-Containing Material.
3. A Guide to Assessment and Management of Asbestos in the Workplace.
4. Asbestos Waste Management Regulations, N.S. Reg. 53/95.
5. Lead in the Workplace: A Guide to Working with Lead, revised January 18, 2019.
6. The Environmental Abatement Council of Canada (EACC) Lead Guideline for Construction, Renovation, Maintenance or Repair.
7. Guidelines for Disposal of Contaminated Solids in Landfills.
8. Nova Scotia Environment Act, 1994-95.
9. Mercury Diversion Standard, N.S. Reg. 161/2018.



10. PCB Management Regulations, N.S. Reg. 163/97.
11. PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act.
12. Surface Coating Materials Regulations, SOR/2016-193, Canada Consumer Product Safety Act.
13. Consolidated Transportation of Dangerous Goods Regulations, including Amendment SOR/2019-101, Transportation of Dangerous Goods Act.
14. 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

Contact the undersigned should you have any questions.

Sincerely,

**Pinchin Ltd.**

Prepared by:

Reviewed by:

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**Hazardous Building Materials Assessment (Management)**

Rockingstone Heights School, 1 Regan Drive, Halifax, NS  
HRCE – Halifax Regional Centre for Education

April 17, 2024  
Pinchin File: 336128.018

Reviewed by:

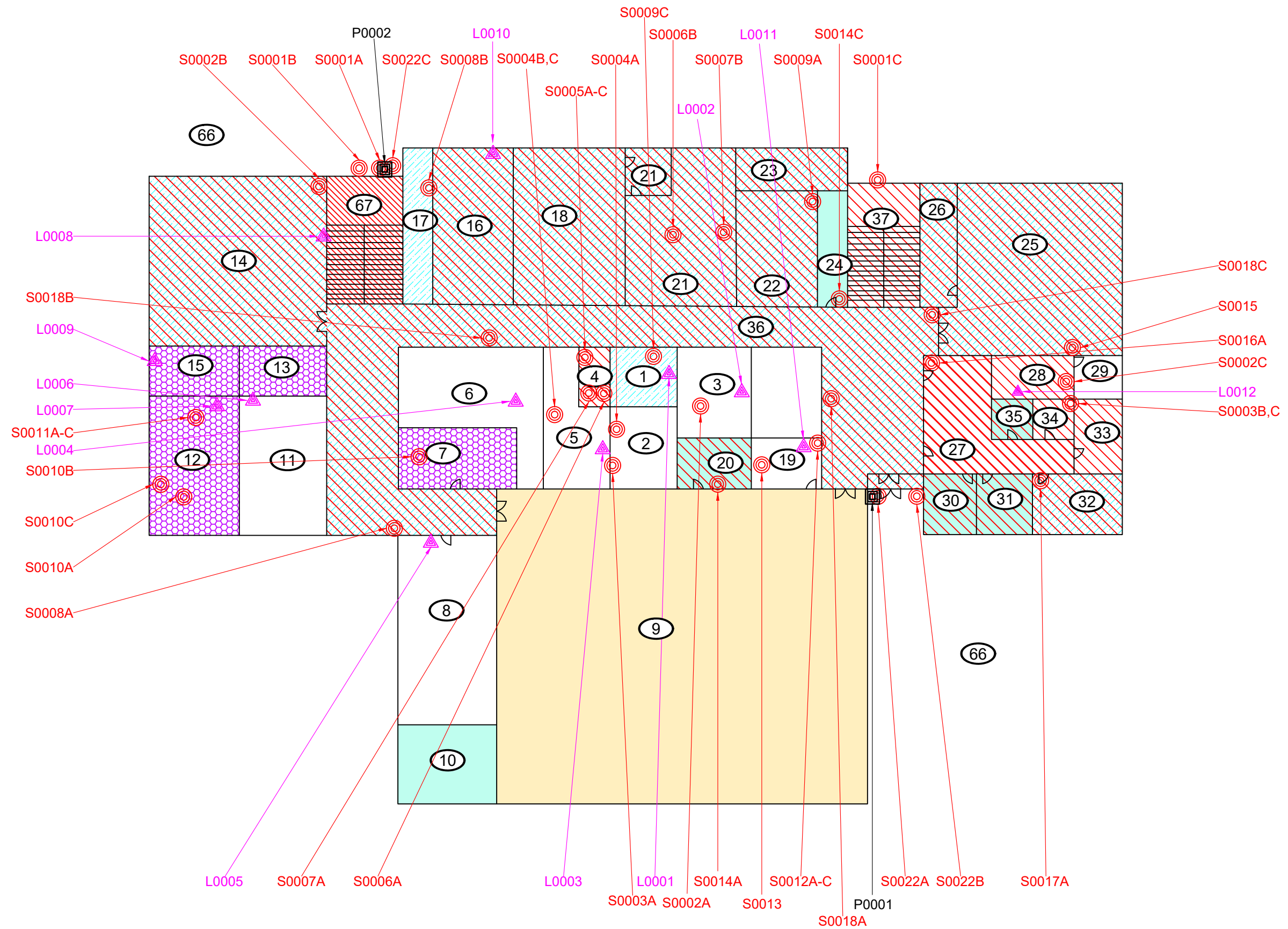
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Encl:	APPENDIX I	Drawings
	APPENDIX II-A	Asbestos Analytical Certificates
	APPENDIX II-B	Lead Analytical Certificates
	APPENDIX II-C	PCB Analytical Certificates
	APPENDIX III	Methodology
	APPENDIX IV	Location Summary Report
	APPENDIX V	Hazardous Materials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





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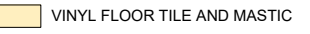
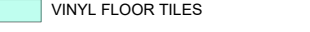
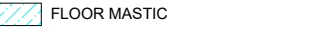
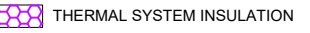
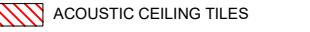
**APPENDIX I**  
**Drawings**





**LEGEND**

-  PINCHIN LOCATION NUMBER
-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PCB BULK SAMPLE

**ASBESTOS-CONTAINING MATERIALS:**

-  VINYL FLOOR TILE AND MASTIC
-  VINYL FLOOR TILES
-  FLOOR MASTIC
-  THERMAL SYSTEM INSULATION
-  ACOUSTIC CEILING TILES

FOR CLARITY, THE FOLLOWING ASBESTOS-CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

-  DRYWALL JOINT COMPOUND
-  CAULKING

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:  
**HALIFAX REGIONAL CENTRE FOR EDUCATION**

PROJECT LOCATION:  
**1 REAGAN DRIVE,  
HALIFAX, NOVA SCOTIA,  
ROCKINGSTONE HEIGHTS SCHOOL**

FIGURE NAME:  
**GROUND FLOOR  
SAMPLE LOCATION PLAN**

PROJECT NUMBER: 336128.018	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: SJH
DATE: APRIL 2024	FIGURE NUMBER: 1 OF 3



**LEGEND**

(X) PINCHIN LOCATION NUMBER

⊙ ASBESTOS BULK SAMPLE

▲ LEAD BULK SAMPLE

ASBESTOS-CONTAINING MATERIALS:

■ VINYL FLOOR TILES

▨ FLOOR MASTIC

■ THERMAL SYSTEM INSULATION

▨ ACOUSTIC CEILING TILES

FOR CLARITY, THE FOLLOWING ASBESTOS-CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

- DRYWALL JOINT COMPOUND
- SINK MASTIC

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:  
**HALIFAX REGIONAL CENTRE FOR EDUCATION**

PROJECT LOCATION:  
**1 REAGAN DRIVE, HALIFAX, NOVA SCOTIA, ROCKINGSTONE HEIGHTS SCHOOL**

FIGURE NAME:  
**SECOND FLOOR SAMPLE LOCATION PLAN**

PROJECT NUMBER:  
**336128.018**

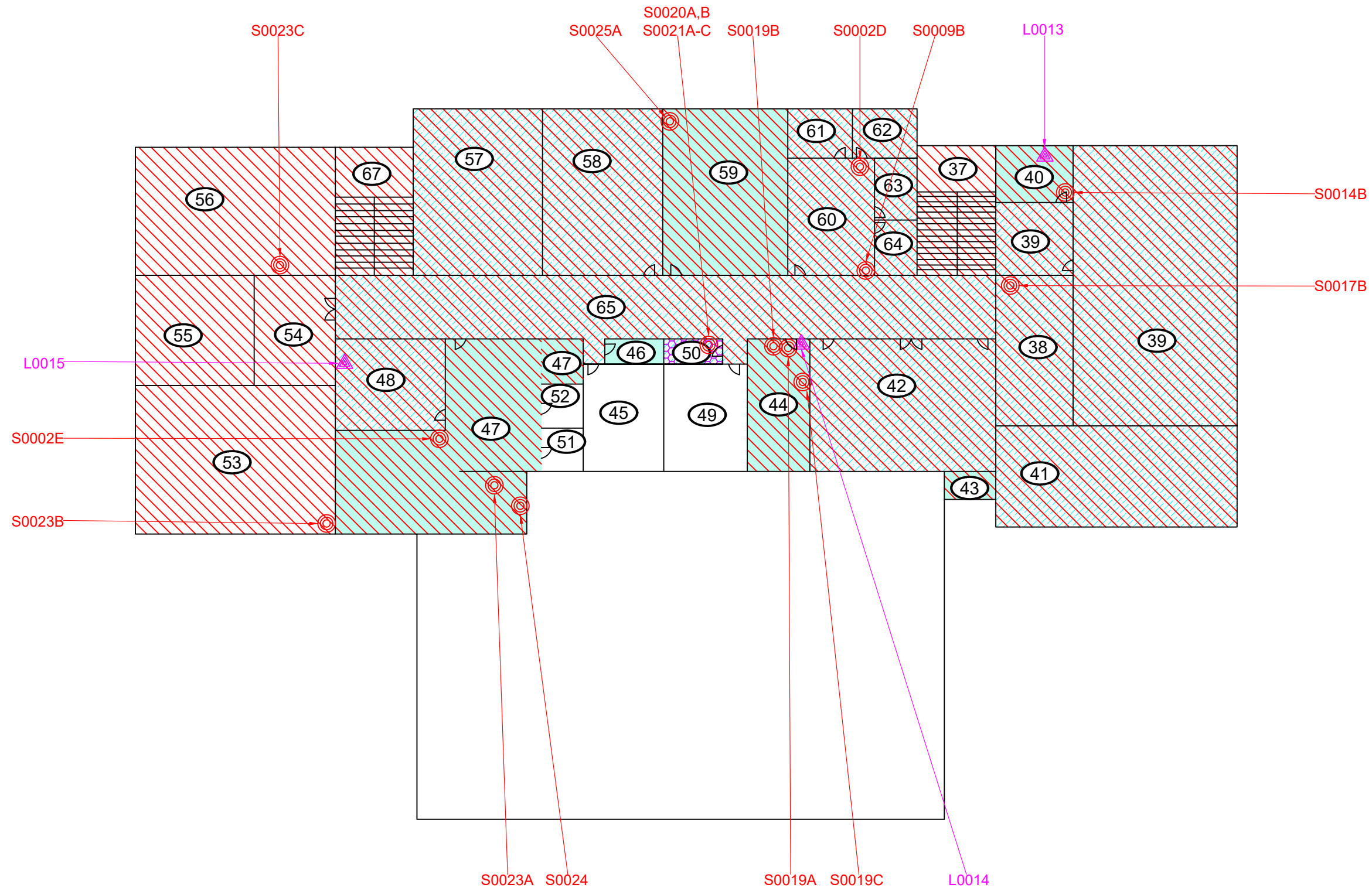
SCALE:  
**NOT TO SCALE**

DRAWN BY:  
**NJ**

REVIEWED BY:  
**SJH**

DATE:  
**APRIL 2024**








FIGURE NUMBER:  
**2 OF 3**







**LEGEND**

-  PINCHIN LOCATION NUMBER
-  ASBESTOS BULK SAMPLE
- NAR NO ACCESS TO ROOM/AREA
- ASBESTOS-CONTAINING MATERIALS:
-  VINYL FLOOR TILES
-  FLOOR MASTIC
-  THERMAL SYSTEM INSULATION
-  ACOUSTIC CEILING TILES
-  FLOOR LEVELLING COMPOUND

FOR CLARITY, THE FOLLOWING ASBESTOS-CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

- DRYWALL JOINT COMPOUND

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.



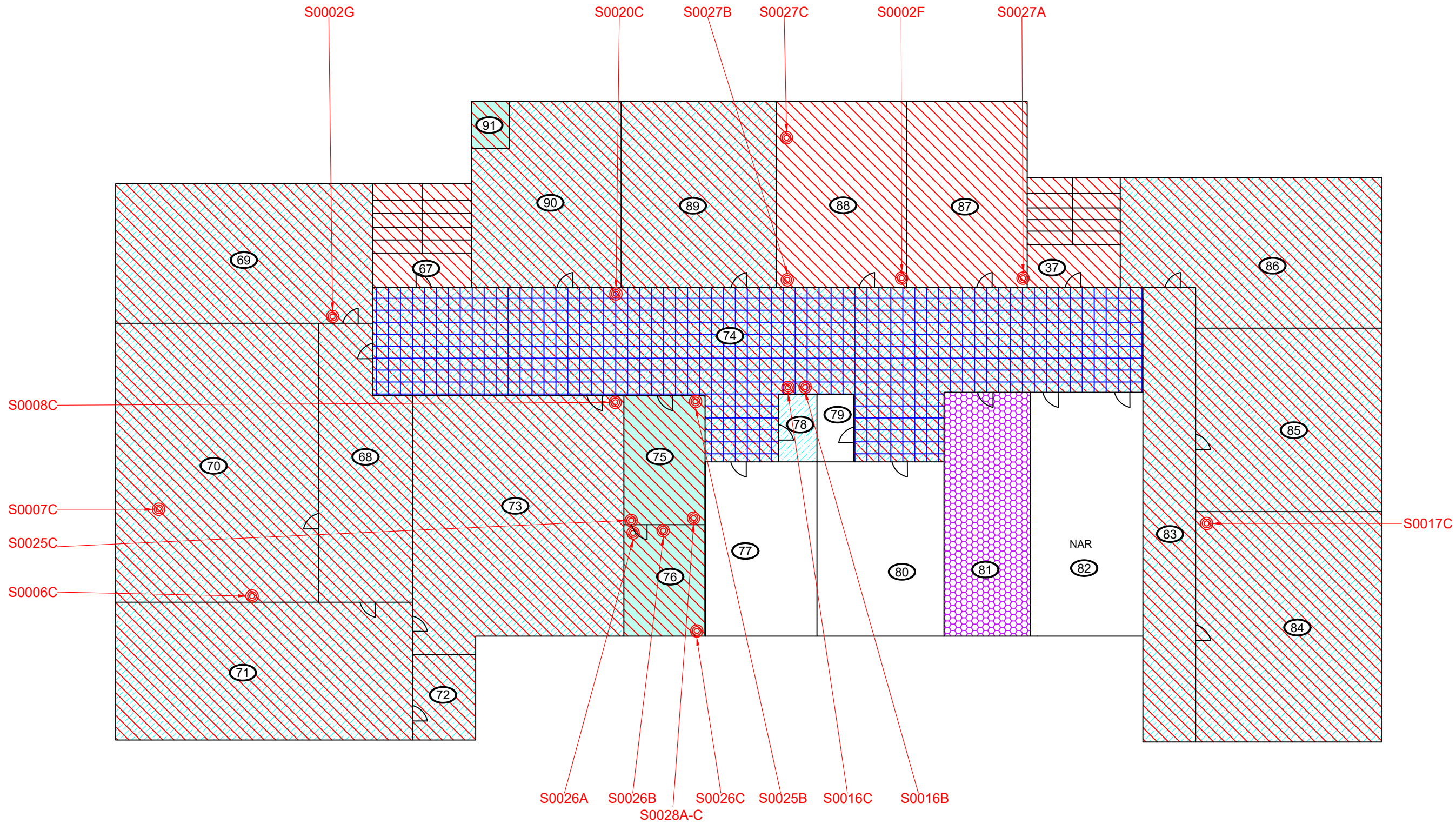
PROJECT NAME:  
**HAZARDOUS BUILDING MATERIALS ASSESSMENT**

CLIENT NAME:  
**HALIFAX REGIONAL CENTRE FOR EDUCATION**

PROJECT LOCATION:  
**1 REAGAN DRIVE,  
HALIFAX, NOVA SCOTIA,  
ROCKINGSTONE HEIGHTS SCHOOL**

FIGURE NAME:  
**THIRD FLOOR  
SAMPLE LOCATION PLAN**

PROJECT NUMBER: 336128.018	SCALE: NOT TO SCALE
DRAWN BY: NJ	REVIEWED BY: SJH
DATE: APRIL 2024	FIGURE NUMBER: 3 OF 3



**APPENDIX II-A**  
**Asbestos Analytical Certificates**





## Pinchin Ltd. Asbestos Laboratory *Certificate of Analysis*

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Analyst(s):** Y. Yan

<b>Date Received:</b>	<b>March 8, 2024</b>	<b>Samples Submitted:</b>	<b>41</b>
<b>Date Analyzed:</b>	<b>March 12, 2024</b>	<b>Phases Analyzed:</b>	<b>51</b>

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The Pinchin Ltd. Dartmouth asbestos laboratory is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 201032-0) for the 'EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, ' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2017. The Pinchin asbestos laboratory uses the aforementioned methods of analysis.

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with provincial regulatory requirements where applicable. Multiple phases within a sample are analyzed and reported separately.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This report relates only to the items tested.

*This report relates only to the items tested and is valid only when signed with a protected, authorized, electronic signature. This report may not be reproduced, except in full, without the written approval of Pinchin Ltd. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. Internal verification studies, quality assurance / control data and laboratory documentation on measurement uncertainty are available upon request.*



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0001A Wall, Door, Caulking, Black, Loc:66, Exterior	Homogeneous, dark brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0001B Wall, Door, Caulking, Black, Loc:66, Exterior	Homogeneous, dark brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0001C Wall, Door, Caulking, Black, Loc:66, Exterior	Homogeneous, dark brown, caulking material.	None Detected	Non-Fibrous Material > 75%
S0002A Ceiling, Drywall And Joint Compound, Loc:3, Custodian Storage Room *DJC only*	Homogeneous, white, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0002B Wall, Drywall And Joint Compound, Loc:14, Classroom *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0002C Wall, Drywall And Joint Compound, Loc:28, Office *DJC only*	Homogeneous, white, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0002D Wall, Drywall And Joint Compound, Loc:60, Office *DJC only*	Homogeneous, off-white, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0002E Wall, Drywall And Joint Compound, Loc:47, Staff Room *DJC only*	Homogeneous, off-white, drywall joint compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

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**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0002F Wall, Drywall And Joint Compound, Loc:88, Classroom *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0002G Wall, Drywall And Joint Compound, Loc:69, Classroom *DJC only*	Homogeneous, white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
S0003A Caulking, Yellow, Loc:2, Washroom *caulking only*	Homogeneous, yellow, adhesive material.	None Detected	Non-Fibrous Material > 75%
S0003B Caulking, Yellow, Loc:34, Washroom *caulking only*	Homogeneous, yellow, adhesive material.	None Detected	Non-Fibrous Material > 75%
Comments:	Another phase is present but was not analyzed, as requested.		
S0003C Caulking, Yellow, Loc:34, Washroom *caulking only*	Homogeneous, yellow, adhesive material.	None Detected	Non-Fibrous Material > 75%
S0004A Caulking, White, Loc:2, Washroom *caulking only*	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%
S0004B Caulking, White, Loc:5, Washroom *caulking only*	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%
S0004C Caulking, White, Loc:5, Washroom *caulking only*	Homogeneous, white, caulking material.	None Detected	Non-Fibrous Material > 75%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0005A Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom	2 Phases: a) Homogeneous, dark grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0005B Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom	a) Homogeneous, dark grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, tan, levelling compound.	None Detected	Non-Fibrous Material > 75%
S0005C Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom	a) Homogeneous, dark grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0006A Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:4, Washroom	Homogeneous, tan, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 25-50% Man-Made Vitreous Fibres 50-75% Non-Fibrous Material 5-10%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0006B Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:21, Classroom	Homogeneous, pale beige, layered, compressed, acoustic ceiling tile.	Amosite 0.5-5%	Cellulose 10-25% Man-Made Vitreous 50-75% Fibres Perlite 5-10% Other Non-Fibrous 5-10%
S0006C Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:70, Classroom			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0007A Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:4, Washroom	Homogeneous, light grey, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0007B Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:21, Classroom	Homogeneous, light grey, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%
S0007C Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:70, Classroom	Homogeneous, light grey, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-Made Vitreous 10-25% Fibres Perlite 10-25% Other Non-Fibrous 0.5-5%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0008A Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:36, Hallway And Lobby	3 Phases: a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	Chrysotile 0.5-5%	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
S0008B Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:17, Storage Room	2 Phases: a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Not Analyzed
Comments:	Analysis of phase b) was stopped due to a previous positive result. Levelling compound is present but was not analyzed, as requested.		
S0008C Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:73, Classroom	a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Not Analyzed > 75%
Comments:	Analysis of phase b) was stopped due to a previous positive result. Levelling compound is present but was not analyzed, as requested.		



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0009A Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:22, Classroom	Homogeneous, white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0009B Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:60, Office	2 Phases: a) Homogeneous, white, consolidated, vinyl floor tile. b) Homogeneous, yellow, mastic on the back of vinyl floor tile.	None Detected None Detected	Non-Fibrous Material > 75% Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0009C Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:1, Custodian Room	3 Phases: a) Homogeneous, white, consolidated, vinyl floor tile. b) Homogeneous, pale beige, mastic on the back of vinyl floor tile. c) Homogeneous, grey, levelling compound.	None Detected None Detected None Detected	Non-Fibrous Material > 75% Non-Fibrous Material > 75% Cellulose 5-10% Non-Fibrous Material > 75%
S0010A Piping, Parging Cement, Loc:12, Boiler Room	Homogeneous, light grey, soft, parging cement.	Chrysotile 50-75%	Non-Fibrous Material 25-50%
S0010B Piping, Parging Cement, Loc:7, LAN Room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)			
		ASBESTOS		OTHER	
S0010C Piping, Parging Cement, Loc:12, Boiler Room				Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.				
S0011A Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room	Homogeneous, white, soft, parging cement.	Chrysotile	50-75%	Non-Fibrous Material	25-50%
S0011B Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room				Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.				
S0011C Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room				Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.				
S0012A Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen	3 Phases:				
	a) Homogeneous, blue, consolidated material on the back of vinyl sheet flooring.	None Detected		Non-Fibrous Material	> 75%
	b) Homogeneous, yellow, adhesive material on the back of vinyl sheet flooring.	None Detected		Non-Fibrous Material	> 75%
	c) Homogeneous, grey, levelling compound.	None Detected		Cellulose	5-10%
				Non-Fibrous Material	> 75%





## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309788  
**Date Analyzed:** March 12, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0012B Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen	4 Phases:		
	a) Homogeneous, blue, consolidated material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, yellow, adhesive material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
	c) Homogeneous, pale beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	d) Non-homogeneous, yellow and black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Levelling compound is present but was not analyzed, as requested.		
S0012C Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen	2 Phases:		
	a) Homogeneous, blue, consolidated, fibrous material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, yellow, adhesive material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
S0013 Sink, Mastic, Grey, Loc:19, Kitchen	Homogeneous, grey, mastic material.	None Detected	Cellulose 5-10% Non-Fibrous Material > 75%

**Reviewed by:**

**Reporting Analyst:**

Jason Stapleton  
2024.03.14 09:55:28-03'00'

Jason Stapleton  
2024.03.14 09:55:11-03'00'

Analyzed By: Y.Y.

Reviewed By: J.S.

Report Sent By: \_\_\_\_\_

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

Special Instructions: Please only analyze the first levelling compound in each vinyl flooring sample set.

<b>Client Name:</b>		HRCE		<b>Project Address:</b>		1 Regan Drive, Halifax, NS	
<b>Portfolio/Building No:</b>				<b>Pinchin File:</b>		336128.018	
<b>Submitted by:</b>		Shawn Harris		<b>Email:</b>		sharris@pinchin.com	
<b>CC Results to:</b>		Allain Thebeau		<b>CC Email:</b>		athebeau@pinchin.com	
<b>Date Submitted:</b>		March	08	2024	<b>Required by:</b>		Month    Day    2020
<b># of Samples:</b>		82 41		<b>Priority:</b>		5 Day Turnaround	
<b>Year of Building Construction (Mandatory, Years ONLY):</b>							
<b>Do NOT Stop on Positive (Sample Numbers):</b>				S0002			
<b>Pinchin Group Company (Mandatory Field):</b>				Pinchin			
<b>HMIS2 Building Reference #:</b>				131182/20242431699674			
<b>To be Completed by Lab Personnel Only:</b>							
<b>Lab Reference #:</b>		b309788		<b>Time:</b>		24 hour clock	
<b>Received by:</b>		J. Stapleton		<b>Date:</b> Mar 08/24		Month    Day    Year	
<b>Name(s) of Analyst(s):</b> <u>Y. Yan</u>							
Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)				
S	0001	A	Wall, Door, Caulking, Black, Loc:66, Exterior <span style="float: right;">ND</span>				
S	0001	B	Wall, Door, Caulking, Black, Loc:66, Exterior <span style="float: right;">ND</span>				
S	0001	C	Wall, Door, Caulking, Black, Loc:66, Exterior <span style="float: right;">ND</span>				
S	0002	A	Ceiling, Drywall And Joint Compound, Loc:3, Custodian Storage Room *DJC only* <span style="float: right;">CH: 0.5-5%</span>				
S	0002	B	Wall, Drywall And Joint Compound, Loc:14, Classroom *DJC only* <span style="float: right;">ND</span>				
S	0002	C	Wall, Drywall And Joint Compound, Loc:28, Office *DJC only* <span style="float: right;">CH: 0.5-5%</span>				
S	0002	D	Wall, Drywall And Joint Compound, Loc:60, Office *DJC only* <span style="float: right;">CH: 0.5-5%</span>				
S	0002	E	Wall, Drywall And Joint Compound, Loc:47, Staff Room *DJC only* <span style="float: right;">CH: 0.5-5%</span>				
S	0002	F	Wall, Drywall And Joint Compound, Loc:88, Classroom *DJC only* <span style="float: right;">ND</span>				

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0002	G	Wall,Drywall And Joint Compound,Loc:69,Classroom *DJC only* ND
S	0003	A	Caulking, Yellow,Loc:2,Washroom *caulking only* NI
S	0003	B	Caulking, Yellow,Loc:34,Washroom *caulking only* NI
S	0003	C	Caulking, Yellow,Loc:34,Washroom *caulking only* NI
S	0004	A	Caulking, White,Loc:2,Washroom *caulking only* NI
S	0004	B	Caulking, White,Loc:5,Washroom *caulking only* NI
S	0004	C	Caulking, White,Loc:5,Washroom *caulking only* NI
S	0005	A	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom a)NI b)NI
S	0005	B	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom a)NI b)NI c)NI
S	0005	C	Floor, Vinyl Floor Tile And Mastic, 12" Grey With Black Flecks, Loc:4, Washroom a)NI b)NI
S	0006	A	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:4, Washroom NI
S	0006	B	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:21, Classroom AM: 0.5-5%
S	0006	C	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole, Loc:70, Classroom (NA)
S	0007	A	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:4, Washroom NI
S	0007	B	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:21, Classroom NI
S	0007	C	Ceiling, Acoustic Tile, Ceiling Tiles (lay-in), 24" X 24" Pinhole And Fleck, Loc:70, Classroom NI

4

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0008	A	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:36, Hallway And Lobby a)ND b)CH:0-55% c)ND
S	0008	B	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:17, Storage Room a)ND b)(NA)
S	0008	C	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White Streak, Loc:73, Classroom a)ND b)(NA)
S	0009	A	Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:22, Classroom ND
S	0009	B	Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:60, Office a)ND b)ND
S	0009	C	Floor, Vinyl Floor Tile And Mastic, 12" White With Blue Flecks, Loc:1, Custodian Room a)ND b)ND c)ND
S	0010	A	Piping, Parging Cement, Loc:12, Boiler Room CH: 50-75%
S	0010	B	Piping, Parging Cement, Loc:7, LAN Room (NA)
S	0010	C	Piping, Parging Cement, Loc:12, Boiler Room (NA)
S	0011	A	Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room CH: 50-75%
S	0011	B	Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room (NA)
S	0011	C	Mechanical Equipment, Heating Water Tank, Thermal Insulation, Loc:12, Boiler Room (NA)
S	0012	A	Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen a)ND b)ND c)ND
S	0012	B	Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen a)ND b)ND c)ND d)ND
S	0012	C	Floor, Vinyl Sheet Flooring, Blue Speckled, Loc:19, Kitchen a)ND b)ND
S	0013		Sink, Mastic, Grey, Loc:19, Kitchen ND



## Pinchin Ltd. Asbestos Laboratory *Certificate of Analysis*

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Analyst(s):** R. Janssen

**Date Received:** March 8, 2024      **Samples Submitted:** 41  
**Date Analyzed:** March 14, 2024      **Phases Analyzed:** 70

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The Pinchin Ltd. Dartmouth asbestos laboratory is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 201032-0) for the 'EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2017. The Pinchin asbestos laboratory uses the aforementioned methods of analysis.

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with provincial regulatory requirements where applicable. Multiple phases within a sample are analyzed and reported separately.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This report relates only to the items tested.

*This report relates only to the items tested and is valid only when signed with a protected, authorized, electronic signature. This report may not be reproduced, except in full, without the written approval of Pinchin Ltd. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. Internal verification studies, quality assurance / control data and laboratory documentation on measurement uncertainty are available upon request.*





## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0014A Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:20, Gymnasium Office	3 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile.	Chrysotile	0.5-5% Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, off-white, levelling compound.	None Detected	Non-Fibrous Material > 75%
S0014B Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:40, Library Supply Room	2 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0014C Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:24, Office	2 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result. Leveling compound is present but was not analyzed, as requested.		
S0015 Sink, Mastic, White, Loc:25, Classroom	Homogeneous, off-white, mastic material.	None Detected	Cellulose 25-50% Non-Fibrous Material 50-75%



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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0016A Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:27, Waiting Area And Hallway	2 Phases: a) Homogeneous, white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0016B Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:74, Hallway	2 Phases: a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	This sample is small in size. For more reliable results, a larger sample is required.		
S0016C Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:74, Hallway	3 Phases: a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, off-white, levelling compound.	None Detected	Non-Fibrous Material > 75%



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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0017A Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:32, Office	2 Phases: a) Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0017B Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:38, Library Hallway	Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0017C Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:84, Classroom	3 Phases: a) Homogeneous, blue, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, white, levelling compound.	None Detected	Non-Fibrous Material > 75%
S0018A Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby	2 Phases: a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		





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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0018B Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby	a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0018C Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby	a) Homogeneous, off-white, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0019A Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office	a) Homogeneous, light grey, consolidated, vinyl floor tile.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Phase b) of this sample is small in size. For more reliable results, a larger sample is required.		



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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0019B Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office	a) Homogeneous, light grey, consolidated, vinyl floor tile.	None Detected	Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0019C Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office	a) Homogeneous, light grey, consolidated, vinyl floor tile.	None Detected	Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.		Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0020A Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:50, Custodian Supply Room	Homogeneous, peach, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
S0020B Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:50, Custodian Supply Room	a) Homogeneous, peach, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0020C Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:74, Hallway	3 Phases: a) Homogeneous, peach, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, yellow, soft, sticky material on the back of vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	c) Homogeneous, grey, levelling compound.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0021A Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room	2 Phases: a) Homogeneous, pale beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0021B Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room	2 Phases: a) Homogeneous, pale beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		



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**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0021C Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room	a) Homogeneous, pale beige, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0022A Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only*	Homogeneous, grey, soft, caulking material.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
S0022B Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only*			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0022C Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only*			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
S0023A Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:47, Staff Room	a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Non-homogeneous, black and yellow, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

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**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0023B Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:53, Classroom	a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Non-homogeneous, black and yellow, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0023C Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:56, Classroom	a) Homogeneous, brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Non-homogeneous, black and yellow, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
S0024 Sink, Mastic, Gold, Loc:47, Staff Room	Homogeneous, black, tar material.	Chrysotile 0.5-5%	Tar and other Non-Fibrous Material > 75%
S0025A Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:59, Classroom	a) Homogeneous, tan, consolidated, vinyl floor tile.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0025B Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:75, Office	3 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, white, levelling compound.	None Detected	Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result.		
S0025C Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:75, Office	2 Phases: a) Homogeneous, tan, consolidated, vinyl floor tile.		Not Analyzed
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Analysis of phase a) was stopped due to a previous positive result. Leveling compound is present but was not analyzed, as requested.		
S0026A Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office	3 Phases: a) Homogeneous, light brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
	c) Homogeneous, white, levelling compound.	None Detected	Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

**Project Name:** HRCE, 1 Regan Drive, Halifax, NS  
**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0026B Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office	a) Homogeneous, light brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Leveling compound is present but was not analyzed, as requested. Another phase is present but there was insufficient material submitted to analyze.		
S0026C Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office	a) Homogeneous, light brown, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Leveling compound is present but was not analyzed, as requested. Another phase is present but there was insufficient material submitted to analyze.		
S0027A Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:87, Classroom	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

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**Project No.:** 0336128.018  
**Prepared For:** S. Harris / A. Thebeau

**Lab Reference No.:** b309790  
**Date Analyzed:** March 14, 2024

### BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
S0027B Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:88, Classroom	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0027C Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:88, Classroom	a) Homogeneous, grey, consolidated, vinyl floor tile.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, soft, sticky material on the back of vinyl floor tile.	None Detected	Tar and other Non-Fibrous Material > 75%
Comments:	Another phase is present but there was insufficient material submitted to analyze.		
S0028A Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only*	Homogeneous, black, soft, caulking material.	None Detected	Non-Fibrous Material > 75%
S0028B Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only*	Homogeneous, black, soft, caulking material.	None Detected	Non-Fibrous Material > 75%
S0028C Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only*	Homogeneous, black, soft, caulking material.	None Detected	Non-Fibrous Material > 75%

**Reviewed by:**

**Reporting Analyst:**

Jason Stapleton  
2024.03.14 12:46:32-03'00'

Pinchin Ltd.  
2024.03.14 12:41:59-03'00'



Analyzed By: RS

Reviewed By: JS

Report Sent By: \_\_\_\_\_

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

Special Instructions: Please only analyze the first levelling compound in each vinyl flooring sample set.

<b>Client Name:</b>	HRCE	<b>Project Address:</b>	1 Regan Drive, Halifax, NS
<b>Portfolio/Building No:</b>		<b>Pinchin File:</b>	336128.018
<b>Submitted by:</b>	Shawn Harris	<b>Email:</b>	sharris@pinchin.com
<b>CC Results to:</b>	Allain Thebeau	<b>CC Email:</b>	athebeau@pinchin.com
<b>Date Submitted:</b>	March 08 2024	<b>Required by:</b>	Month Day 2020
<b># of Samples:</b>	41	<b>Priority:</b>	5 Day Turnaround
<b>Year of Building Construction (Mandatory, Years ONLY):</b>			
<b>Do NOT Stop on Positive (Sample Numbers):</b>	S0002		
<b>Pinchin Group Company (Mandatory Field):</b>	Pinchin		
<b>HMIS2 Building Reference #:</b>	131182/20242431699674		

**To be Completed by Lab Personnel Only:**

<b>Lab Reference #:</b>	b309790	<b>Time:</b>	24 hour clock
<b>Received by:</b>	J. Stapleton	<b>Date:</b> Mar 08 / 24	Month Day Year
<b>Name(s) of Analyst(s):</b>	R. Janssen		

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0014	A	Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:20, Gymnasium Office a)CHO.5-5 b)MO c)MO
S	0014	B	Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:40, Library Supply Room a) (MA) b) MO
S	0014	C	Floor, Vinyl Floor Tile And Mastic, 12" Tan With Off White Streak, Loc:24, Office a) (MA) b) MO
S	0015		Sink, Mastic, White, Loc:25, Classroom NO
S	0016	A	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:27, Waiting Area And Hallway a)MO b)MO
S	0016	B	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:74, Hallway a)MO b)MO
S	0016	C	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey And White Flecks, Loc:74, Hallway a)MO b)MO c)MA
S	0017	A	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:32, Office a)MO b)MO
S	0017	B	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:38, Library Hallway NO

16

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0017	C	Floor, Vinyl Floor Tile And Mastic, 12" Blue With White And Blue Flecks, Loc:84, Classroom a)MO b)MO c)MO
S	0018	A	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby a)MO b)MO
S	0018	B	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby a)MO b)MO
S	0018	C	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Grey Flecks, Loc:36, Hallway And Lobby a)MO b)MO
S	0019	A	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office a)CHO.S-S b)MO
S	0019	B	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office a)(MA) b)MO
S	0019	C	Floor, Vinyl Floor Tile And Mastic, 12" Off White With Tan Streak, Loc:44, Office a)(MA) b)MO
S	0020	A	Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:50, Custodian Supply Room MO
S	0020	B	Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:50, Custodian Supply Room a)MO b)MO
S	0020	C	Floor, Vinyl Floor Tile And Mastic, 12" Peach With White Flecks, Loc:74, Hallway a)MO b)MO c)CHO.S-S
S	0021	A	Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room a)MO b)MO
S	0021	B	Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room a)MO b)MO
S	0021	C	Floor, Vinyl Floor Tile And Mastic, 12" Yellow, Loc:50, Custodian Supply Room a)MO b)MO
S	0022	A	Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only* CHO.S-S
S	0022	B	Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only* (MA)
S	0022	C	Wall, Door, Caulking, White Caulking, Loc:66, Exterior *caulking only* (MA)

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
S	0023	A	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:47, Staff Room a)MO b)MO
S	0023	B	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:53, Classroom a)MO b)MO
S	0023	C	Floor, Vinyl Floor Tile And Mastic, 12" Brown With White And Dark Brown Flecks, Loc:56, Classroom a)MO b)MO
S	0024		Sink, Mastic, Gold, Loc:47, Staff Room CH0.5-5
S	0025	A	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:59, Classroom a)CH0.5-5 b)MO
S	0025	B	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:75, Office a)(NA) b)MO c)MO
S	0025	C	Floor, Vinyl Floor Tile And Mastic, 12" Beige With Tan Streaks, Loc:75, Office a)(NA) b)MO
S	0026	A	Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office a)MO b)MO c)MO
S	0026	B	Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office a)MO b)MO
S	0026	C	Floor, Vinyl Floor Tile And Mastic, 12" Pink With White And Brown Flecks, Loc:76, Office a)MO b)MO
S	0027	A	Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:87, Classroom a)MO b)MO
S	0027	B	Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:88, Classroom a)MO b)MO
S	0027	C	Floor, Vinyl Floor Tile And Mastic, 12" Light Blue With Black Flecks, Loc:88, Classroom a)MO b)MO
S	0028	A	Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only* MO
S	0028	B	Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only* MO
S	0028	C	Wall, Caulking, Black Butyl Tape, Loc:75, Office *caulking only* MO

**APPENDIX II-B**  
**Lead Analytical Certificates**



# EMSL Canada Inc.

2756 Slough Street, Mississauga, ON L4T 1G3

Phone/Fax: (289) 997-4602 / (289) 997-4607

<http://www.EMSL.com>

[torontolab@emsl.com](mailto:torontolab@emsl.com)

EMSL Canada Or	552403618
CustomerID:	55PINC50
CustomerPO:	336128.018
ProjectID:	

Attn: **Shawn Harris**  
**Pinchin Environmental**  
**42 Dorey Avenue**  
**Dartmouth, Nova Scotia, NS B3B 0B1**

Phone: (902) 461-9999  
 Fax: (902) 461-9932  
 Received: 3/11/2024 09:52 AM  
 Collected: 3/7/2024

Project: **336128.018**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Collected	Analyzed	Weight	RDL	Lead Concentration
L0001 552403618-0001	3/7/2024	3/13/2024	0.2455 g	0.0081 % wt	<0.0081 % wt
	Site: Off-white paint, Location 1				
L0002 552403618-0002	3/7/2024	3/13/2024	0.2466 g	0.0081 % wt	<0.0081 % wt
	Site: Yellow paint, Location 3				
L0003 552403618-0003	3/7/2024	3/13/2024	0.2513 g	0.0080 % wt	<0.0080 % wt
	Site: Beige paint, Location 5				
L0004 552403618-0004	3/7/2024	3/13/2024	0.2534 g	0.0080 % wt	<0.0080 % wt
	Site: White paint, Location 6				
L0005 552403618-0005	3/7/2024	3/13/2024	0.2509 g	0.0080 % wt	0.049 % wt
	Site: Black paint, Location 8				
L0006 552403618-0006	3/7/2024	3/13/2024	0.2536 g	0.0080 % wt	<0.0080 % wt
	Site: Greyish blue paint, Location 11				
L0007 552403618-0007	3/7/2024	3/13/2024	0.2457 g	0.0081 % wt	<0.0081 % wt
	Site: Light grey paint, Location 12				
L0008 552403618-0008	3/7/2024	3/13/2024	0.2480 g	0.0081 % wt	<0.0081 % wt
	Site: Tan paint, Location 14				
L0009 552403618-0009	3/7/2024	3/13/2024	0.2544 g	0.0080 % wt	<0.0080 % wt
	Site: Light green paint, Location 15				
L0010 552403618-0010	3/7/2024	3/13/2024	0.2453 g	0.0082 % wt	<0.0082 % wt
	Site: Green paint, Location 16				
L0011 552403618-0011	3/7/2024	3/13/2024	0.2536 g	0.0080 % wt	<0.0080 % wt
	Site: Light teal paint, Location 19				

Rowena Fanto, Lead Supervisor  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

\* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON AIHA LAP, LLC-ELLAP Accredited #196142

Initial report from 03/16/2024 10:32:32





**EMSL Canada Inc.**

2756 Slough Street, Mississauga, ON L4T 1G3

Phone/Fax: (289) 997-4602 / (289) 997-4607

<http://www.EMSL.com>

[torontolab@emsl.com](mailto:torontolab@emsl.com)

EMSL Canada Or 552403618  
CustomerID: 55PINC50  
CustomerPO: 336128.018  
ProjectID:

Attn: **Shawn Harris**  
**Pinchin Environmental**  
**42 Dorey Avenue**  
**Dartmouth, Nova Scotia, NS B3B 0B1**

Phone: (902) 461-9999  
Fax: (902) 461-9932  
Received: 3/11/2024 09:52 AM  
Collected: 3/7/2024

Project: 336128.018

**Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client SampleDescription</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
L0012 552403618-0012	3/7/2024	3/13/2024 Site: Dark blue paint, Location 28	0.2545 g	0.0080 % wt	<0.0080 % wt
L0013 552403618-0013	3/7/2024	3/13/2024 Site: Pink paint, Location 40	0.2512 g	0.0080 % wt	0.0094 % wt
L0014 552403618-0014	3/7/2024	3/13/2024 Site: White paint, Location 44	0.2466 g	0.0081 % wt	<0.0081 % wt
L0015 552403618-0015	3/7/2024	3/13/2024 Site: Grey paint, Location 48	0.2544 g	0.0080 % wt	<0.0080 % wt

Rowena Fanto, Lead Supervisor  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

\* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON AIHA LAP, LLC-ELLAP Accredited #196142

Initial report from 03/16/2024 10:32:32

**APPENDIX II-C**  
**PCB Analytical Certificates**



CLIENT NAME: PINCHIN LTD.  
42 Dorey Avenue  
Dartmouth, NS B3B0B1  
(902) 461-9999

ATTENTION TO: Shawn Harris  
PROJECT: 336128.018

AGAT WORK ORDER: 24X127655

TRACE ORGANICS REVIEWED BY: Jason Coughtrey, Operation Manager

DATE REPORTED: Mar 18, 2024

PAGES (INCLUDING COVER): 5

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.





## Certificate of Analysis

AGAT WORK ORDER: 24X127655

PROJECT: 336128.018

11 Morris Drive, Unit 122  
 Dartmouth, Nova Scotia  
 CANADA B3B 1M2  
 TEL (902)468-8718  
 FAX (902)468-8924  
<http://www.agatlabs.com>

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Shawn Harris

SAMPLING SITE:

SAMPLED BY:

### Total Polychlorinated Biphenyls in Solids

DATE RECEIVED: 2024-03-08

DATE REPORTED: 2024-03-18

		P0001, White		P0002, Black	
SAMPLE DESCRIPTION:		caulking		caulknig	
SAMPLE TYPE:		Other		Other	
DATE SAMPLED:		2024-03-07		2024-03-07	
Parameter	Unit	G / S	RDL	5709113	5709114
Total Polychlorinated Biphenyls	mg/kg		0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-140		82	73

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by \*)

Certified By:

## Quality Assurance

 CLIENT NAME: PINCHIN LTD.  
 PROJECT: 336128.018  
 SAMPLING SITE:

 AGAT WORK ORDER: 24X127655  
 ATTENTION TO: Shawn Harris  
 SAMPLED BY:

### Trace Organics Analysis

RPT Date: Mar 18, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Total Polychlorinated Biphenyls in Solids															
Total Polychlorinated Biphenyls	1		< 0.5	< 0.5	NA	< 0.5	118%	60%	140%	70%	60%	140%	66%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.  
 If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:





## Method Summary

CLIENT NAME: PINCHIN LTD.

AGAT WORK ORDER: 24X127655

PROJECT: 336128.018

ATTENTION TO: Shawn Harris

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Total Polychlorinated Biphenyls	ORG-120-5106	EPA SW846/8081/8080	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD

Have feedback?  
Scan here for a quick survey!



Unit 122 • 11 Morris Drive  
Dartmouth, NS  
B3B 1M2  
P: 902.468.8718

### Laboratory Use Only

Arrival Condition:  Good  Poor (see notes)  
Arrival Temperature: 17.4, 21.3  
Hold Time: \_\_\_\_\_  
AGAT Job Number: 24X127655

Notes: 24 MAR 8 10 AM

## Chain of Custody Record

weearth.agatlabs.com • www.agatlabs.com

### Report Information

Company: Pinchin Ltd.  
Contact: Shawn Harris/Allain Thebeau  
Address: 42 Dorey Avenue  
Dartmouth, Nova Scotia  
Phone: 902.225.9324 Fax: \_\_\_\_\_  
Client Project #: 336128.018  
AGAT Quotation: \_\_\_\_\_  
Please Note: If quotation number is not provided client will be billed full price for analysis.

### Report Information (Please print):

1. Name: Shawn Harris  
Email: sharris@pinchin.com  
2. Name: Allain Thebeau  
Email: athebeau@pinchin.com

### Report Format

- Single Sample per page  
 Multiple Samples per page  
 Excel Format Included  
 Export

### Turnaround Time Required (TAT)

Regular TAT  5 to 7 working days  
Rush TAT  Same day  1 day  
 2 days  3 days

Date Required: \_\_\_\_\_

### Invoice To

Same Yes  / No

Company: Pinchin Ltd.  
Contact: \_\_\_\_\_  
Address: 42 Dorey Avenue  
Dartmouth, NS  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
PO/Credit Card#: \_\_\_\_\_

### Regulatory Requirements (Check):

- List Guidelines on Report  Do not list Guidelines on Report  
 PIRI  
 Tier 1  Res  Pot  Coarse  
 Tier 2  Com  N/Pot  Fine  
 Gas  Fuel  Lube  
 CCME  CDWQ  
 Industrial  NSEQS-Cont Sites  
 Commercial  HRM 101  
 Res/Park  Storm Water  
 Agricultural  Waste Water  
 FWAL  Other \_\_\_\_\_  
 Sediment

Drinking Water Sample:  Yes  No Salt Water Sample  Yes  No  
Reg. No.: \_\_\_\_\_

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments - Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	<input type="checkbox"/> BOD <input type="checkbox"/> CBOD	pH	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input type="checkbox"/> MF	<input type="checkbox"/> HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other:	Other:	Hazardous (Y/N)								
P0001, White caulking	03/07/2024			2.12g																																
P0002, Black caulking	03/07/2024			1.41g																																

Samples Relinquished By (Print Name): <b>Shawn Harris</b>	Date/Time: <b>03/08/2024/10:50</b>	Samples Received By (Print Name):	Date/Time:	Pink Copy - Client	Page 1 of 1
Samples Relinquished By (Sign): 	Date/Time: <b>03/08/2024/10:50</b>	Samples Received By (Sign):	Date/Time:	Yellow Copy - AGAT	N°:
				White Copy - AGAT	

**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:

<b>Jurisdiction</b>	<b>Friable</b>	<b>Non-Friable</b>
Nova Scotia	0.5% <sup>1</sup>	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)

For a complete description of the Evaluation Criteria and Basis of Recommendations, refer to Annex A.

## 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/Method No. 7420; flame atomic absorption.

Analytical results were compared to the following criteria.

<b>Jurisdiction</b>	<b>Units (%)</b>	<b>Units (ppm) / (mg/kg)</b>
Nova Scotia	0.009	90

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

<sup>1</sup> Or any amount if vermiculite

### **1.3 Silica**

Building materials known to contain crystalline silica (e.g. concrete, 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, 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.

Select caulking and sealants 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: Methodology for Hazardous Building Materials Assessment, HAZ, January 16, 2024



## **METHODOLOGY ANNEX A EVALUATION CRITERIA**

## 1.0 EVALUATION CRITERIA AND BASIS OF RECOMMENDATIONS

The detailed asbestos assessment provides information regarding the location, condition, accessibility and friability of the asbestos-containing materials (ACM). In order to make recommendations for compliance with current regulations, Pinchin developed the following criteria.

### 2.0 EVALUATION OF CONDITION

#### 2.1 Friable Sprayed or Trowelled Fireproofing, Thermal Insulation and Texture Finishes (Surfacing Materials)

To evaluate the condition of ACM sprayed or trowelled on fireproofing, sprayed or trowelled thermal insulation (non-mechanical), or texture, decorative or acoustic finishes, the following criteria are applied:

<b>Good</b>	Surface of material shows no significant signs of damage, deterioration or delamination. Good condition includes unencapsulated or unpainted fireproofing or texture finishes, where no or limited delamination or damage is observed, or encapsulated fireproofing or texture finishes where the encapsulant or paint has been applied after the damage or fallout occurred.
<b>Poor</b>	A sprayed material that shows signs of significant damage or is significantly delaminating or deteriorating. This may be limited to surface delamination or some portion of the substrate may be exposed.

In Locations where damage exists in isolated areas, both good and poor condition may be applicable. The extent of each condition will be recorded. Fair condition is not utilized in the evaluation of ACM sprayed or trowelled fireproofing, sprayed or trowelled thermal insulation (non-mechanical), or texture, decorative or acoustic finishes.

The evaluation of the above products above ceilings may be limited by the number of observations and by building components such as ducts or full height walls that obstruct the above ceiling observations.

#### 2.2 Friable Mechanical or Thermal System Insulation (TSI)

To evaluate the condition of mechanical insulation on vessels, boilers, breeching, ducts, pipes, fan units, equipment etc. the following criteria are applied:

<b>Good</b>	Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor damage (i.e. scuffs or stains), but the jacketing is not penetrated.
<b>Fair</b>	Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges from minor to none. Damage can be repaired.

---

<b>Poor</b>	Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired. Includes components where insulation may have been removed incompletely.
-------------	---

---

The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. It is often not possible to observe each foot of mechanical insulation from all angles.

### 2.3 Potentially Friable Materials and Miscellaneous Friable Materials

Potentially friable ACM are products that are basically non-friable while in place but have the potential to generate friable dust upon removal or if significantly disturbed without appropriate procedures. These products may become friable if damaged. Potentially friable materials include materials such as acoustic ceiling tiles and plaster. To evaluate the condition of potentially friable materials, the following criteria are applied:

---

<b>Good</b>	No significant damage or deterioration. Still serving its intended use as a building material or finish.
<b>Fair</b>	Showing signs of some cracking or breakage, but is not deteriorating (e.g. cracked plaster, broken but in place ceiling tile, missing tile or section of plaster etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
<b>Poor</b>	Significant deterioration or breaking apart of the material. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material has deteriorated to a point it has become friable. Normally potentially friable ACM in Poor condition is not repairable and requires at least localized removal and replacement.

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### 2.4 Non-Friable Materials

Non-friable ACM cover a wide range of products with a wide variation in their tendency to release dust or asbestos fibres to the air. Many of these materials, (particularly where the matrix is an unweathered bitumen, asphalt or tar material) do not release fibres except in very unusual circumstances or during significant disturbance (e.g. use of abrasive power tools). Others with a cementitious matrix (asbestos-cement products) can more readily release dust due to abrasion, demolition, weathering, etc. The potential for asbestos release from non-friable ACM is always lower than from friable ACM. To evaluate the condition of non-friable Materials, the following criteria are applied:

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<b>Good</b>	No significant damage or deterioration. Still serving its intended use as a building material or finish.
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<b>Fair</b>	Showing signs of some cracking or breakage but is not deteriorating (e.g. cracked vinyl floor tile, missing piece of tile or transite, etc.). The condition is such that it is still serving its intended use as a building material or finish but may require repair for mainly cosmetic purposes.
<b>Poor</b>	Significant deterioration or breaking apart of the material to the point at which it cannot be repaired, and it will require at least local removal. Material has deteriorated to the point it is not serving its intended use as building material or finish. Material may have deteriorated to a point where traffic or disturbance may cause it to become friable.

## 2.5 Evaluation of ACM Debris

The identification of the exact location or presence of debris on the top of ceiling tiles is limited by the number of observations made and the presence of building components such as ducts or full height walls that obstruct observations.

The presence of fallen or dislodged ACM is noted separately from the ACM source and is referred to as Debris. Debris may be friable if from a friable ACM source or a badly deteriorated non-friable ACM source. Debris may also be non-friable (such as fallen pieces of transite sheet or mastic fittings, or broken, dislodged floor tiles).

<b>Debris</b>	Debris may be friable or non-friable but is always identified as debris.
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## 2.6 Evaluation of Presumed Asbestos-Containing Material (PACM)

Presumed asbestos-containing materials (PACM), are building materials that may contain asbestos but were not sampled or analyzed due to inaccessibility or the need to perform destructive testing to obtain a reasonable sample set. Evaluation of these materials is based on the assumption that these PACM are asbestos-containing.

A list of PACM is provided in the report and they are generally not included in the detailed room by room reports. Typically, they are excluded because they are inaccessible or present in very small quantities. If PACM are evaluated, Pinchin uses the criteria that correspond with the type (and friability) of the material listed above.

### 3.0 EVALUATION OF ACCESSIBILITY

The accessibility of building materials known or suspected of being ACM is rated according to the following criteria:

<b>Access (A)</b>	Common areas of the building within reach of all building users (approximately 8' - 9' from floor or standard ceiling height). Includes other areas where occupant activities may result in disturbance of material that is not normally within reach from floor level, but may be disturbed by common activities (e.g. gymnasiums, workshops, warehouses.)
<b>Access (B)</b>	Areas of the building accessed primarily by Maintenance/Caretaking/Janitorial Staff and within reach without use of a ladder. Includes areas within reach in Boiler Rooms, Electrical Rooms, Janitors Closets, Elevator Rooms, Mechanical Rooms, etc. Includes materials within reach from fixed ladders or catwalks, mezzanines, and accessible pipe chases.
<b>Access (C) and Visible</b>	Areas of the building above 8' - 9' where use of a ladder or scaffold is required to reach the ACM. Only includes ACM that are visible to view without the removal or opening of other building components such as ceiling tiles or service access panels. Visible column on HMIS sheets will say YES.
<b>Access (C) and not Visible</b>	Areas of the building above 8' - 9' where use of a ladder or scaffold is required to reach the ACM. Includes ACM that are not visible to view and require the removal of a building component to see, such as ceilings tiles or access panels to view and access. Includes rarely entered crawl spaces, attic spaces, etc. Observations will be limited to the extent visible from the access points. Visible column on HMIS sheets will say NO.
<b>Access (D)</b>	Areas of the building behind inaccessible solid ceiling systems, walls or equipment etc. where demolition of the ceiling, wall or equipment etc. is required to reach the ACM. Material inaccessible due to height or location or is only accessed under unusual situations. Evaluation of condition and extent of ACM is limited or impossible, depending on the surveyor's ability to visually examine materials in Access D.

### 4.0 ACTION MATRIX AND DEFINITIONS

Pinchin's evaluation of the viability of a specific asbestos control option is based on the consideration of the friability, condition, accessibility and visibility of a material. The logic used is that damaged ACM located in an area frequently accessed by all building occupants is of a higher priority than damaged ACM located in an infrequently accessed service area. The action matrix considers the potential for fibre release (primarily from friable ACM) and the possible concerns from regulatory bodies and many building occupants to all damaged ACM (including non-friable).

In any building with asbestos, many current regulations require an Asbestos Management Program be implemented. Depending on the condition and the accessibility, more active measures such as repair or removal may be recommended. The following matrix provides guidance for recommended Actions in the absence of renovation or demolition. In the event of construction or maintenance activity which will disturb ACM more aggressive control or removal will be required.

#### 4.1 Action Matrix

The following tables outline the action decisions based on the relationship of assessed factors. Table I applies to friable ACM. Table II applies to non-friable ACM.

**Table I Decision Matrix for Friable ACM**

Access	Condition			Debris
	Good	Fair	Poor	
(A)	Action 5 <sup>1</sup>	Action 5 <sup>2</sup>	Action 3	Action 1
(B)	Action 7	Action 6 <sup>3</sup>	Action 3	Action 1
(C) Visible	Action 7	Action 6	Action 3	Action 2
(C) Not Visible	Action 7	Action 7	Action 4	Action 2
(D)	Action 7	Action 7	Action 7	Action 7

**Table II Decision Matrix for Potentially Friable and Non-Friable ACM**

Access	Condition			Debris
	Good	Fair	Poor	
(A)	Action 7	Action 7 <sup>4</sup>	Action 3	Action 1
(B)	Action 7	Action 7	Action 3	Action 1
(C) Visible	Action 7	Action 7	Action 4	Action 2
(C) Not Visible	Action 7	Action 7	Action 4	Action 2
(D)	Action 7	Action 7	Action 7	Action 7

#### 4.2 Action Definitions

The following are the definitions in the Action Matrix Table presented above:

Action Definitions	
<b>Action 1</b>	Clean-Up of ACM Debris Restrict access that is likely to cause a disturbance of the ACM Debris and clean up ACM Debris. Utilize appropriate asbestos precautions.

<sup>1</sup> If friable ACM in access (A)/Good condition is not proactively removed Action 7 (Manage) is recommended.

<sup>2</sup> If friable ACM in access (A)/Fair condition is not proactively removed repair is recommended.

<sup>3</sup> If friable ACM in access (B)/Fair condition is likely to be disturbed after repair proactive removal is recommended.

<sup>4</sup> Action 7 is recommended for all non-friable ACM in Fair condition however some clients may wish to repair or take some action primarily for cosmetic reasons



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**Action Definitions**

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<b>Action 2</b>	<p>Precautions for Access Which may Disturb ACM Debris</p> <p>Use appropriate means to isolate the debris or to limit entry to the area which may disturb the material. At locations where ACM Debris can remain in place in lieu of removal or clean-up (e.g. Debris on top of ceiling tiles or behind lockable door), Utilize appropriate asbestos precautions to enter the area if this will disturb debris. The precautions will be required until the ACM Debris has been cleaned up.</p>
<b>Action 3</b>	<p>ACM Removal</p> <p>Remove ACM. Utilize asbestos procedures appropriate to the scope of the removal work. Until it is removed, restrict access to the material so it is not disturbed.</p>
<b>Action 4</b>	<p>Precautions for Work Which may Disturb ACM in Poor Condition. Utilize appropriate asbestos precautions if ACM may be disturbed by work on or near ACM. This does not require restricting access to the area, only control of work which may contact or disturb the ACM. Removal is the only viable option if work will disturb ACM.</p>
<b>Action 5</b>	<p>Proactive ACM Removal</p> <p>Remove friable ACM where the presence of friable asbestos in Good condition is not desirable. If friable ACM in Fair condition is not removed, then Repair friable ACM.</p>
<b>Action 6</b>	<p>ACM Repair</p> <p>Repair friable ACM in Fair condition which is not likely to be damaged again or disturbed by normal use of the area or room. Pinchin recommends proactive removal if friable ACM is likely to be damaged or disturbed during normal use of the area or room.</p>
<b>Action 7</b>	<p>Asbestos Management Program with Routine Surveillance Implement an Asbestos Management Program, including routine surveillance of ACM. Reassess materials regularly (typically once per year).</p>

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Master Template: Methodology Annex A to Appendix I Evaluation Criteria, HAZ, August 17, 2023

**APPENDIX IV**  
**Location Summary Report**



Client:HRCE

Site: 1 Regan Drive, Halifax, NS

Building Name: Rockingstone School

Survey Date: 2024-03-05

Last Re-Assessment:

Building Phases: A: 1974

Location No.	Name or Description	Area ft <sup>2</sup>	Floor No.	Bldg. Phase	Notes
1	Custodian Room	100	1	A	
2	Washroom	192	1	A	
3	Custodian Storage Room	270	1	A	
4	Washroom	35	1	A	
5	Washroom	280	1	A	
6	Gymnasium Storage Room	448	1	A	
7	LAN Room	120	1	A	
8	Gymnasium Stage	720	1	A	
9	Gymnasium	4900	1	A	
10	Gymnasium Equipment Room	254	1	A	
11	Sprinkler	280	1	A	
12	Boiler Room	880	1	A	
13	Storage Room	90	1	A	
14	Classroom	1116	1	A	
15	Storage Room	80	1	A	
16	Office	380	1	A	
17	Storage Room	112	1	A	
18	Classroom	1020	1	A	
19	Kitchen	310	1	A	
20	Gymnasium Office	120	1	A	
21	Classroom	620	1	A	
22	Classroom	440	1	A	
23	Office	200	1	A	
24	Office	149	1	A	
25	Classroom	1054	1	A	
26	Storage Room	192	1	A	
27	Waiting Area And Hallway	386	1	A	
28	Office	120	1	A	
29	Office	120	1	A	
30	Office	100	1	A	
31	Office	100	1	A	
32	Office	160	1	A	
33	Storage Room	168	1	A	
34	Washroom	48	1	A	
35	Storage Room	49	1	A	
36	Hallway And Lobby	2048	1	A	
37	Stairwell	600	1	A	
38	Library Hallway	90	2	A	
39	Library	1340	2	A	
40	Library Supply Room	130	2	A	
41	Classroom	924	2	A	
42	Classroom	950	2	A	
43	Music Room Supply Room	72	2	A	
44	Office	276	2	A	
45	Washroom	260	2	A	
46	Washroom	100	2	A	
47	Staff Room	840	2	A	
48	Classroom	280	2	A	
49	Washroom	168	2	A	
50	Custodian Supply Room	146	2	A	
51	Washroom	40	2	A	
52	Washroom	40	2	A	
53	Classroom	880	2	A	
54	Hallway	160	2	A	
55	Classroom	510	2	A	
56	Classroom	988	2	A	
57	Classroom	660	2	A	
58	Classroom	660	2	A	
59	Classroom	720	2	A	
60	Office	352	2	A	
61	Office	100	2	A	
62	Office	100	2	A	

Location No.	Name or Description	Area ft <sup>2</sup>	Floor No.	Bldg. Phase	Notes
63	Office	100	2	A	
64	Office	100	2	A	
65	Hallway	854	2	A	
66	Exterior	0		A	
67	Stairwell	600	1	A	
68	Hallway	200	3	A	
69	Classroom	820	3	A	
70	Classroom	704	3	A	
71	Classroom	800	3	A	
72	Supply Room	80	3	A	
73	Classroom	480	3	A	
74	Hallway	854	3	A	
75	Office	96	3	A	
76	Office	204	3	A	
77	Washroom	224	3	A	
78	Washroom	42	3	A	
79	Custodian Supply Room	146	3	A	
80	Washroom	224	3	A	
81	Machine Room	320	3	A	
82	Classroom	0	3	A	NO ACCESS - Locked and custodians did not have access
83	Hallway	112	3	A	
84	Classroom	1048	3	A	
85	Classroom	544	3	A	
86	Classroom	950	3	A	
87	Classroom	660	3	A	
88	Classroom	660	3	A	
89	Classroom	660	3	A	
90	Classroom	660	3	A	
91	Storage Room	90	3	A	

**APPENDIX V**  
**Hazardous Materials Summary Report / Sample Log**

**Client:**HRCE      **Site:** 1 Regan Drive, Halifax, NS      **Building Name:** Rockingstone School      **Survey Date:** 2024-03-05

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
Asbestos	S0001 ABC	Wall   Door   Caulking   Black	66	A	60	0	0	0	None Detected	No	
Asbestos	S0002 ABCDEFG	Ceiling, Wall, Ceiling, Wall     Drywall And Joint Compound	1,2,3,5,6,14,16,18,19,20,21,22,23,27,28,29 33,34,38,39,40,41,42,45,46,47,48,49,51,52,53 54,55,56,57,58,60,61,62,63,64,68,69,70,71,75 76,77,78,80,81,83,84,85,86,87,88	A	0	18344	0	0	Chrysotile	Yes	NF
Asbestos	S0003 ABC	Other     Caulking   Yellow	2,34,46	A	9	0	0	0	None Detected	No	
Asbestos	S0004 ABC	Other     Caulking   White	2,5	A	11	0	0	0	None Detected	No	
Asbestos	S0005 ABC	Floor     Vinyl Floor Tile And Mastic   12" Grey With Black Flecks	4	A	0	35	0	0	None Detected	No	
Asbestos	S0006 ABC	Ceiling   Acoustic Tile   Ceiling Tiles (lay-in)   24" X 24" Pinhole	4,14,16,18,20,21,22,23,25,26,27,28,30,31,32 33,34,35,36,37,38,39,40,41,42,43,44,47,48,53 54,55,56,57,58,59,60,61,62,63,64,65,67,68,69 70,71,72,73,74,75,76,83,84,85,86,87,88,89,90 91	A	0	26910	0	0	Amosite	Yes	PF
Asbestos	S0007 ABC	Ceiling   Acoustic Tile   Ceiling Tiles (lay-in)   24" X 24" Pinhole And Fleck	4,16,18,21,23,36,58,59,65,69,70,71,73,74	A	0	790	0	0	None Detected	No	
Asbestos	S0008 ABC	Floor     Vinyl Floor Tile And Mastic   12" Brown With White Streak	17,25,26,36,65,72,73,74,78	A	0	2118	0	0	Chrysotile	Yes	NF
Asbestos	S0009 ABC	Floor     Vinyl Floor Tile And Mastic   12" White With Blue Flecks	1,14,16,18,21,22,23,50,58,60,61,62,63,64,68 69,70,71,89,90	A	0	8376	0	0	[Asbestos]	[Yes]	NF
Asbestos	S0010 ABC	Piping     Parging Cement	7,12,13,15,50,81	A	0	0	37	0	Chrysotile	Yes	F
Asbestos	S0011 ABC	Mechanical Equipment   Heating Water Tank   Thermal Insulation	12	A	0	0	1	0	Chrysotile	Yes	F
Asbestos	S0012 ABC	Floor     Vinyl Sheet Flooring   Blue Speckled	19	A	0	310	0	0	None Detected	No	
Asbestos	S0013	Other   Sink   Mastic, Grey	19,25,40,86	A	0	0	4	0	None Detected	No	
Asbestos	S0014 ABC	Floor     Vinyl Floor Tile And Mastic   12" Tan With Off White Streak	10,20,24,30,31,35,40,43,47	A	0	1626	0	0	Chrysotile	Yes	NF
Asbestos	S0015	Other   Sink   Mastic, White	25	A	0	0	1	0	None Detected	No	
Asbestos	S0016 ABC	Floor     Vinyl Floor Tile And Mastic   12" Off White With Grey And White Flecks	25,27,28,29,30,33,34,36,74	A	0	1336	0	0	None Detected	No	
Asbestos	S0017 ABC	Floor     Vinyl Floor Tile And Mastic   12" Blue With White And Blue Flecks	32,38,39,41,42,48,57,58,83,84,85,86	A	0	7678	0	0	[Asbestos]	[Yes]	NF
Asbestos	S0018 ABC	Floor     Vinyl Floor Tile And Mastic   12" Off White With Grey Flecks	36,74	A	0	1793	0	0	None Detected	No	
Asbestos	S0019 ABC	Floor     Vinyl Floor Tile And Mastic   12" Off White With Tan Streak	44,46	A	0	375	0	0	Chrysotile	Yes	NF
Asbestos	S0020 ABC	Floor     Vinyl Floor Tile And Mastic   12" Peach	25,30,32,50,74,78	A	0	345	0	0	Chrysotile	Yes	NF

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
		With White Flecks									
Asbestos	S0021 ABC	Floor    Vinyl Floor Tile And Mastic   12" Yellow	50	A	0	5	0	0	None Detected	No	
Asbestos	S0022 ABC	Wall   Door   Caulking   White Caulking	66	A	80	0	0	0	Chrysotile	Yes	NF
Asbestos	S0023 ABC	Floor    Vinyl Floor Tile And Mastic   12" Brown With White And Dark Brown Flecks	47,53,54,55,56	A	0	2555	0	0	None Detected	No	
Asbestos	S0024	Other   Sink   Mastic, Gold	47	A	0	0	1	0	Chrysotile	Yes	NF
Asbestos	S0025 ABC	Floor    Vinyl Floor Tile And Mastic   12" Beige With Tan Streaks	59,75,91	A	0	906	0	0	Chrysotile	Yes	NF
Asbestos	S0026 ABC	Floor    Vinyl Floor Tile And Mastic   12" Pink With White And Brown Flecks	76	A	0	204	0	0	None Detected	No	
Asbestos	S0027 ABC	Floor    Vinyl Floor Tile And Mastic   12" Light Blue With Black Flecks	87,88	A	0	1320	0	0	None Detected	No	
Asbestos	S0028 ABC	Wall    Caulking   Black Butyl Tape	75	A	12	0	0	0	None Detected	No	
Asbestos	V9000	Floor    Vinyl Floor Tile And Mastic   12" Beige With White And Grey Flecks, 12" Brown, 12" Brown And White Flecks, 12" Off White With Brown And White Flecks, 12" Off White With Brown Flecks, 12" Peach, 12" Purple With Dark Purple Flecks	10,26,30,31,36,47,65	A	0	124	0	0	Confirmed Asbestos	Yes	NF
Asbestos	V9500	Floor    Mortar   12" Grey Tiles	67	A	0	120	0	0	Presumed Asbestos	Yes	NF
Asbestos	V9500	Floor    Terrazzo   Pebble Pattern	2,3,5,6,20,36,37,45,49,51,52,67,77,80	A	0	3327	0	0	Presumed Asbestos	Yes	NF
Asbestos	V9500	Floor    Vinyl Floor Tile And Mastic   12" Off White With Blue And Brown Flecks, 12" Orange With Dark Orange Flecks	9	A	0	4900	0	0	Presumed Asbestos	Yes	NF
Asbestos	V0000	Ceiling   Acoustic Tile   Ceiling Tiles (lay-in)   24" X 24" Dense Pinhole	38,39,41,42,44,48,55,56,57,58,65,68,69,70,71,74,83,84,86	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Ceiling   Acoustic Tile   Ceiling Tiles (lay-in)   24" X 24" Pinhole And Fissure	14,21,22,23,25,27,29,35,36,37,40,57,58,59,60,61,62,63,64,65,67,68,69,70,71,72,73,74,75,76,85,86	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Ceiling   Acoustic Tile   Drywall (no Compound)	19	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Floor    Vinyl Floor Tile And Mastic   12" Beige With Brown Marks	34	A	0	18	0	0	Non Asbestos	No	
Asbestos	V0000	Floor    Vinyl Floor Tile And Mastic   12" Blue With White And Dark Blue Flecks	14	A	0	70	0	0	Non Asbestos	No	
Asbestos	V0000	Floor    Vinyl Floor Tile And Mastic   12" Grey With Dark Grey And White Flecks	18	A	0	10	0	0	Non Asbestos	No	
Asbestos	V0000	Floor    Vinyl Floor Tile And Mastic   12" Off White With Brown Fleck	27,33	A	0	54	0	0	Non Asbestos	No	
Asbestos	V0000	Floor    Vinyl Floor Tile And Mastic   12" Purple	25,48,68,69,70,71	A	0	46	0	0	Non	No	

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
Asbestos	V0000	With Dark Purple Flecks Floor     Vinyl Floor Tile And Mastic   12" White With Light Grey And Grey Flecks	41,50,58	A	0	37	0	0	Asbestos Non Asbestos	No	
Asbestos	V0000	Other   Window   Caulking   Black	14,18,21,23,25,29,30,31,32,33,39,40,41,45,47 53,55,56,57,58,59,61,62,63,64,69,70,71,73,76 77,80,84,86,87,88,89,90	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other     Caulking   Clear	4,45	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other   Window   Caulking   Grey	36,37,67	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Other     Caulking   White	34,45,49,77,80	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Wall     Caulking   Brown	66	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Wall     Caulking   Clear	25	A	0	0	0	0	Non Asbestos	No	
Asbestos	V0000	Wall     Caulking   Grey	66	A	0	0	0	0	Non Asbestos	No	
Paint	L0001	Wall   Concrete (precast)   Off White Paint	1,2,4,5,14,16,17,18,21,22,23,24,25 27,33,34,35,36,37,38,39,40,41,42,45,49 53,54,55,56,60,65,67,68,69,71,74,75,76 77,78,80,83,84,87,88,89,90,91	A	0	40005	0	0		No	-
Paint	L0002	Wall   Concrete (precast)   Yellow Paint	3,6,9,10,20,41,47,50,51,52,59,61,62 63,64,79	A	0	19407	0	0		No	-
Paint	L0003	Wall   Concrete (precast)   Beige Paint	5,36,65	A	0	754	0	0		No	-
Paint	L0004	Ceiling   Drywall And Joint Compound   White Paint	3,6,19,51,52,77,78,80,86	A	0	2298	0	0		No	-
Paint	L0005	Wall   Concrete (precast)   Black Paint	8	A	0	2860	0	0	Lead (Low)	Yes	-
Paint	L0006	Wall   Concrete (precast)   Greyish Blue Paint	11,13,73,85	A	0	2510	0	0		No	-
Paint	L0007	Wall   Concrete (precast)   Light Grey Paint	11,12	A	0	840	0	0		No	-
Paint	L0008	Wall   Drywall And Joint Compound   Tan Paint	14	A	0	120	0	0		No	-
Paint	L0009	Wall   Concrete (precast)   Light Green Paint	7,13,15,46,50,81	A	0	2786	0	0		No	-
Paint	L0010	Wall   Concrete (precast)   Green Paint	16,18,21,23	A	0	742	0	0		No	-
Paint	L0011	Wall   Concrete (precast)   Light Teal Paint	19	A	0	930	0	0		No	-
Paint	L0012	Wall   Concrete (precast)   Dark Blue Paint	28,29,31,32,56,69	A	0	2208	0	0		No	-
Paint	L0013	Wall   Concrete (poured)   Pink Paint	26,40,43,72	A	0	1372	0	0	Lead (Low)	Yes	-
Paint	L0014	Wall   Concrete (poured)   White Paint	44,57,58	A	0	2380	0	0		No	-
Paint	L0015	Wall   Concrete (precast)   Grey Paint	48,57,70	A	0	2040	0	0		No	-
Paint	V9500	Floor   Concrete (poured)   Green	7	A	0	120	0	0	Presumed Lead	Yes	-
Paint	V9500	Structure   Metal   Orange paint	1,8,9,10	A	0	5974	0	0	Presumed Lead	Yes	-
Paint	V9500	Wall   Concrete (poured)   Light purple, Blue,	14,49,86	A	0	580	0	0	Presumed	Yes	-

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
		Dark grey							Lead		
Paint	V9500	Wall   Drywall And Joint Compound   Blue paint, Teal paint, Purple	14,22,53	A	0	1056	0	0	Presumed Lead	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	1	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	11,12	A	0	0	2	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	2	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	20,27	A	0	0	3	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	3	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	34,36,37,45,49	A	0	0	12	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	5	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	50	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	6	A	0	0	1	0	Presumed Lead Product	Yes	-
Lead Product	V9500	Batteries In Emer. Lights	8,9,65,67,74,77,79,80,81	A	0	0	24	0	Presumed Lead Product	Yes	-
PCB	P0001	Caulking   White	66	A	80	0	0	0	-	No	-
PCB	P0002	Caulking   Black	66	A	60	0	0	0	-	No	-
PCB	V0000	Caulking	4,14,18,21,23,25,29,30,31,32,33,34,36 37,39,40,41,45,47,49,53,55,56,57,58,59 61,62,63,64,66,67,69,70,71,73,76,77,80 84,86,87,88,89,90	A	0	0	0	0	-	No	-
PCB	V0000	Light Ballasts	1,2,3,4,5,6,7,8,10,11,12,13,14 15,16,17,18,19,20,21,22,23,24,25,26,27 28,29,30,31,32,33,34,35,36,37,38,39,40 41,42,43,44,45,46,47,48,49,50,51,52,53 54,55,56,57,58,59,60,61,62,63,64,65,67	A	0	0	0	0	-	No	-

HAZMAT	Sample No	System/Component/Material/Sample Description	Locations	Bldg. Phase	LF	SF	EA	%	Type	Positive	Friability
			68,69,70,71,72,73,74,75,76,77,78,79,80 81,83,84,85,86,87,88,89,90,91								
Mould	V9500	Ceiling Tiles (lay-in)	18,71	A	0	10	0	0	Presumed Mould	Yes	-
Hg	V0000	Light Fixture	1,2,3,4,5,6,7,8,10,11,12,13,14 15,16,17,18,19,20,21,22,23,24,25,26,27 28,29,30,31,32,33,34,35,36,37,38,39,40 41,42,43,44,45,46,47,48,49,50,51,52,53 54,55,56,57,58,59,60,61,62,63,64,65,67 68,69,70,71,72,73,74,75,76,77,78,79,80 81,83,84,85,86,87,88,89,90,91	A	0	0	0	0	-	No	-
Hg	V0000	Thermostat	30,31,32,33,47,61,62,63,64,86,89,90	A	0	0	12	0	-	No	-



## 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**  
**Confirmed and Presumed Report**

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #1 : Custodian Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		100(7)			SF	S0009C	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		45(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #1 : Custodian Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Structure <sup>2</sup>	Metal	100		SF	V9500			Presumed Lead	

1 - Door  
2 - Too high to sample

**Client:** HRCE  
**Location:** #1 : Custodian Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #1 : Custodian Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #2 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 192

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		192(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		192(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #2 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 192

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #2 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 192

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #2 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 192

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #3 : Custodian Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 270

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		270(7)			SF	S0002A	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		270(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #3 : Custodian Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 270

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	60		SF		Light blue paint		No	

1 - Door  
2 - No discreet place to sample

**Client:** HRCE  
**Location:** #3 : Custodian Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 270

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #3 : Custodian Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 270

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #4 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 35

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		31(7)			SF	S0006A	Amosite	0.5-5%	Confirmed Asbestos	PF

**Client:** HRCE  
**Location:** #4 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 35

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #4 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 35

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #5 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 280

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		280(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		280(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #5 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 280

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #5 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 280

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #5 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 280

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #6 : Gymnasium Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 448

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		448(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		448(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #6 : Gymnasium Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 448

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #6 : Gymnasium Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 448

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #6 : Gymnasium Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 448

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #7 : LAN Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Piping <sup>1</sup>		Parging Cement	Elbow		A	Y			2(5)		EA	S0010B	Chrysotile	50-75%	Confirmed Asbestos	F

1 - Exposed is fair

**Client:** HRCE  
**Location:** #7 : LAN Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Floor <sup>2</sup>	Concrete (poured)	120		SF	V9500	Green		Presumed Lead	

1 - Door  
2 - No discreet place to sample

**Client:** HRCE  
**Location:** #7 : LAN Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #8 : Gymnasium Stage  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

PAINT								
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Wall	Concrete (precast)	2140		SF	L0005	Black paint	Pb: 0.049 %	Lead (Low)
Other <sup>1</sup>	Wood							No
Structure <sup>2</sup>	Metal	720		SF	V9500	Orange paint		Presumed Lead
Floor	Wood	720		SF	V0005	Black paint	Pb: 0.049 %	Lead (Low)

1 - Door  
2 - Too high to sample

**Client:** HRCE  
**Location:** #8 : Gymnasium Stage  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	2	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #8 : Gymnasium Stage  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #9 : Gymnasium  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 4900

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" off white with blue and brown flecks			A	Y		4000(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Floor <sup>2</sup>		Vinyl Floor Tile and Mastic, 12" orange with dark orange flecks			A	Y		900(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

- 1 - No discreet place to sample
- 2 - No discreet place to sample

**Client:** HRCE  
**Location:** #9 : Gymnasium  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 4900

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Structure <sup>2</sup>	Metal	4900		SF	V9500	Orange paint		Presumed Lead	

- 1 - Door
- 2 - Too high to sample

**Client:** HRCE  
**Location:** #9 : Gymnasium  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 4900

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	3	EA	V9500	Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #10 : Gymnasium Equipment Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 254

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		204(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" off white with brown and white flecks			A	Y		16(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF
Floor <sup>2</sup>		Vinyl Floor Tile and Mastic, 12" off white with brown flecks			A	Y		34(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

2 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client:** HRCE  
**Location:** #10 : Gymnasium Equipment Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 254

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Structure <sup>2</sup>	Metal	254		SF	V9500	Orange paint		Presumed Lead	

1 - Door

2 - Too high to sample

**Client:** HRCE  
**Location:** #10 : Gymnasium Equipment Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 254

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #11 : Sprinkler  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

PAINT								
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Other <sup>1</sup>	Metal							No

1 - Door

**Client:** HRCE  
**Location:** #11 : Sprinkler  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #11 : Sprinkler  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #12 : Boiler Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Mechanical Equipment	Heating Water Tank	Thermal Insulation		Canvas	B	Y		1(7)			EA	S0011ABC	Chrysotile	50-75%	Confirmed Asbestos	F
Piping		Parging Cement	Elbow		B	Y		22(7)		1(3)	EA	S0010AC	Chrysotile	50-75%	Confirmed Asbestos	F

**Client:** HRCE  
**Location:** #12 : Boiler Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Metal							No	

1 - Door

**Client:** HRCE  
**Location:** #12 : Boiler Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #12 : Boiler Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #13 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Piping		Parging Cement	Elbow		A	Y		1(5)			EA	V0010	Chrysotile	50-75%	Confirmed Asbestos	F

**Client:** HRCE  
**Location:** #13 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall	Concrete (precast)	200		SF		White paint		No	

1 - Door

**Client:** HRCE  
**Location:** #13 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #14 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1116

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1104(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		1010(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		1100(7)			SF	S0002B	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #14 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1116

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	300		SF	V9500	Blue paint		Presumed Lead	
Wall <sup>3</sup>	Concrete (poured)	80		SF	V9500	Light purple		Presumed Lead	

- 1 - Door
- 2 - No discreet place to sample
- 3 - No discreet place to sample

**Client:** HRCE  
**Location:** #14 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1116

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

- 1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #15 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Piping		Parging Cement	Elbow		A	Y		3(5)			EA	V0010	Chrysotile	50-75%	Confirmed Asbestos	F

**Client:** HRCE  
**Location:** #15 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #15 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #16 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 380**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		46(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		380(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		300(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #16 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 380**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #16 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 380**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #17 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 112

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		112(7)			SF	S0008B	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #17 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 112

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #17 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 112

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #18 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 1020

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1008(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" off white with grey flecks			A	Y		1010(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		300(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #18 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 1020

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #18 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 1020

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

Client: HRCE  
Location: #18 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 1020

MOULD								
System	Material	Visible	Quantity	Unit	Sample Type	Sample No	Sample Description	Mould
Ceiling	Ceiling Tiles (lay-in)	Y	5	SF	V	9500		Presumed

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #19 : Kitchen  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 310

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		170(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #19 : Kitchen  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 310

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #19 : Kitchen  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 310

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #20 : Gymnasium Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		21(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		99(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		99(7)			SF	S0014A	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		21(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #20 : Gymnasium Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #20 : Gymnasium Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #20 : Gymnasium Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #21 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 620

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		560(7)			SF	S0006B	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		620(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		280(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #21 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 620

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #21 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 620

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #22 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 440

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		560(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		436(7)	4(7)		SF	S0009A	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		440(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #22 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 440

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	420		SF	V9500	Teal paint		Presumed Lead	

- 1 - Door
- 2 - No discreet place to sample

**Client:** HRCE  
**Location:** #22 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 440

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

- 1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #23 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**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	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		4(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		200(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		320(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #23 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 200

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #23 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 200

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #24 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 149

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		99(7)			SF	S0014C	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #24 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 149

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #24 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 149

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #25 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1054

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		4(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		1007(7)			SF	V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		1(7)			SF	V0020	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #25 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1054

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #25 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1054

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #26 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 192

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		4(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		192(7)			SF	V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" brown			A	Y		1(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client:** HRCE  
**Location:** #26 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 192

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall	Concrete (poured)	576		SF	V0013	Pink paint	Pb: 0.0094 %	Lead (Low)	

1 - Door

**Client:** HRCE  
**Location:** #26 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 192

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #27 : Waiting Area And Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 386

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		4(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		525(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #27 : Waiting Area And Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 386

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #27 : Waiting Area And Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 386

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	2	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #27 : Waiting Area And Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 386

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #28 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 120

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		120(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		160(7)			SF	S0002C	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #28 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 120

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #28 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 120

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #29 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Wall		Drywall and joint compound			A	Y		160(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #29 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #29 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 120

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #30 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		4(7)			SF	V0020	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		70(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" brown and white flecks			A	Y		5(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client:** HRCE  
**Location:** #30 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	300		SF		Multi colored		No	

1 - Door  
2 - Less than 500 SF

**Client:** HRCE  
**Location:** #30 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #31 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" peach			A	Y		10(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		90(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Considered non-asbestos based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client:** HRCE  
**Location:** #31 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Wood	80		SF		White		No	

1 - Door

2 - Less than 500 SF

**Client:** HRCE  
**Location:** #31 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #32 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 160

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		160(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		13(7)			SF	V0020	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		147(7)			SF	S0017A	[Asbestos]		[Asbestos]	NF

**Client:** HRCE  
**Location:** #32 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 160

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Wood	80		SF		White		No	

1 - Door  
2 - Less than 500 SF

**Client:** HRCE  
**Location:** #32 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 160

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #33 : Storage Room**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 168**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		168(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		340(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #33 : Storage Room**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 168**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #33 : Storage Room**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 1**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 168**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #34 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 48

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		48(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		64(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #34 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 48

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #34 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 48

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #34 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 48

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #35 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 49

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		48(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		49(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #35 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 49

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #35 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 49

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #36 : Hallway And Lobby  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 2048

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1024(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		103(7)			SF	S0008A	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" brown			A	Y		32(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF
Floor <sup>2</sup>		Terrazzo, Pebble pattern			A	Y		80(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

2 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #36 : Hallway And Lobby  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 2048

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Other <sup>2</sup>	Metal							No	

1 - Door

2 - Door

**Client:** HRCE  
**Location:** #36 : Hallway And Lobby  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 2048

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	6	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #36 : Hallway And Lobby  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 1

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 2048

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #37 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		300(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		600(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #37 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Metal							No	

1 - Door

Client: HRCE  
Location: #37 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	3	EA	V9500	Presumed

Client: HRCE  
Location: #37 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #38 : Library Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		70(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		84(7)	6(7)		SF	S0017B	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		160(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #38 : Library Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #38 : Library Hallway  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #39 : Library**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 1340**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1228(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		1340(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		668(7)	2(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #39 : Library**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 1340**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #39 : Library**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 1340**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #40 : Library Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 130

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1228(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		130(7)			SF	S0014B	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		170(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #40 : Library Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 130

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall	Concrete (poured)	170		SF	L0013	Pink paint	Pb: 0.0094 %	Lead (Low)	
Wall	Drywall and joint compound	170		SF	V0013	Pink paint	Pb: 0.0094 %	Lead (Low)	

1 - Door

**Client:** HRCE  
**Location:** #40 : Library Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 130

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #41 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 924

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		924(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		921(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		336(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #41 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 924

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #41 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 924

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #42 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		1228(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		950(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		668(7)	2(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #42 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #42 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #43 : Music Room Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 72

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		72(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		72(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #43 : Music Room Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 72

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall	Concrete (poured)	216		SF	V0013	Pink paint	Pb: 0.0094 %	Lead (Low)	

1 - Door

**Client:** HRCE  
**Location:** #43 : Music Room Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 72

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #44 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 276

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		276(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" off white with tan streak			A	Y		276(7)			SF	S0019ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #44 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 276

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #44 : Office  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 276

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #45 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 260

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		260(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		260(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #45 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 260

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #45 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 260

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #45 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 260

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #46 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 100

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" off white with tan streak			A	Y		99(7)			SF	V0019	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		150(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #46 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 100

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #46 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 100

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #47 : Staff Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 840

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		840(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" tan with off white streak			A	Y		813(7)			SF	V0014	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" purple with dark purple flecks			A	Y		10(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF
Other	Sink	Mastic, Gold			C	N		1(7)			EA	S0024	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		837(7)	3(7)		SF	S0002E	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client:** HRCE  
**Location:** #47 : Staff Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 840

PAINT								
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Other <sup>1</sup>	Wood							No

1 - Door

**Client:** HRCE  
**Location:** #47 : Staff Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 840

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #48 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		280(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		270(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		350(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #48 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #48 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 280

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #49 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 168

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		168(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		168(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #49 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 168

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Concrete (poured)	80		SF	V9500	Blue		Presumed Lead	

1 - Door  
2 - No discreet place to sample

Client: HRCE  
Location: #49 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 168

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #49 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 168

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #50 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		70(7)			SF	S0020AB	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		44(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Piping <sup>1</sup>		Parging Cement	Elbow		B	Y		2(7)			EA	V0010	Chrysotile	50-75%	Confirmed Asbestos	F

1 - Can't reach to sample in this location

**Client:** HRCE  
**Location:** #50 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #50 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #50 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #51 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		39(7)	1(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		40(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall		Drywall and joint compound			A	Y		120(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #51 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #51 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #52 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		40(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		40(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Wall		Drywall and joint compound			A	Y		117(7)	2(7)	1(3)	SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

1 - Sampling would be too destructive

**Client:** HRCE  
**Location:** #52 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #52 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 40

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #53 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		880(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		336(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #53 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	336		SF	V9500	Purple		Presumed Lead	

- 1 - Door
- 2 - No discreet place to sample

**Client:** HRCE  
**Location:** #53 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 880

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

- 1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #54 : Hallway  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 160

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		160(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		225(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #54 : Hallway  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 160

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #54 : Hallway  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 160

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #55 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 510

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		478(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		820(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #55 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 510

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #55 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 510

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #56 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 988

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		988(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		377(7)	3(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #56 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 988

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #56 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 2

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 988

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #57 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		660(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		660(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		290(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #57 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #57 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #58 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		584(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		646(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		7(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		290(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #58 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #58 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #59 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		584(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streaks			A	Y		720(7)			SF	S0025A	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #59 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #59 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 720

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #60 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 352

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		352(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		352(7)			SF	S0009B	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		360(7)			SF	S0002D	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #60 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 352

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #60 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 352

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #61 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		100(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		150(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #61 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #61 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #62 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		100(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		150(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #62 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #62 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #63 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		100(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		150(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #63 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #63 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 100**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #64 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		100(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		100(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		150(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #64 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #64 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 2

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 100

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #65 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		798(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		838(7)				V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Vinyl Floor Tile and Mastic, 12" beige with white and grey flecks			A	Y		12(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF
Floor <sup>2</sup>		Vinyl Floor Tile and Mastic, 12" brown			A	Y		4(7)			SF	V9000	Confirmed Asbestos		Confirmed Asbestos	NF

1 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

2 - Considered asbestos-containing based on homogenous installation with the sampled vinyl floor tiles present in the location

**Client: HRCE**  
**Location: #65 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Other <sup>2</sup>	Metal							No	

1 - Door

2 - Door

**Client: HRCE**  
**Location: #65 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	6	EA	V9500	Presumed

**Client: HRCE**  
**Location: #65 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 2**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #66 : Exterior  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor:

Building Name: Rockingstone School  
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
Wall	Door	Caulking, White caulking			A	Y		80(7)			LF	S0022ABC	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #67 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		300(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		480(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF
Floor <sup>2</sup>		Mortar, 12" grey tiles		Ceramic Tiles	D	N		120(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive  
2 - Sampling would be too destructive

Client: HRCE  
Location: #67 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Metal							No	

1 - Door

Client: HRCE  
Location: #67 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	3	EA	V9500	Presumed

Client: HRCE  
Location: #67 : Stairwell  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 1

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 600

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #68 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**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	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		180(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		192(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		300(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #68 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 200**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #68 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 200**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #69 : Classroom**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 820**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		796(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		813(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		400(7)			SF	S0002G	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #69 : Classroom**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 820**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client: HRCE**  
**Location: #69 : Classroom**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 820**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #70 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 704

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		696(7)			SF	S0006C	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		696(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		400(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #70 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 704

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #70 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 704

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #71 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 800

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		696(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		792(7)			SF	V0009	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		400(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

Client: HRCE  
Location: #71 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 800

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #71 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 800

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

Client: HRCE  
Location: #71 : Classroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 800

MOULD								
System	Material	Visible	Quantity	Unit	Sample Type	Sample No	Sample Description	Mould
Ceiling <sup>1</sup>	Ceiling Tiles (lay-in)	Y	5	SF	V	9500		Presumed

1 - 4 water damaged ceiling tiles

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #72 : Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		80(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		80(7)			SF	V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #72 : Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall	Concrete (precast)	240		SF	V0013	Pink paint	Pb: 0.0094 %	Lead (Low)	

1 - Door

**Client:** HRCE  
**Location:** #72 : Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 80

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #73 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 480

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		426(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		478(7)	2(7)		SF	S0008C	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #73 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 480

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #73 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 480

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #74 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		722(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		103(7)			SF	V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		256(7)			SF	S0020C	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #74 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Other <sup>2</sup>	Metal							No	

1 - Door  
2 - Door

**Client: HRCE**  
**Location: #74 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	6	EA	V9500	Presumed

**Client: HRCE**  
**Location: #74 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 854**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #75 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 96

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		92(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streaks			A	Y		96(7)			SF	S0025BC	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		96(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #75 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 96

PAINT								
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Other <sup>1</sup>	Wood							No
Wall <sup>2</sup>	Drywall and joint compound	96		SF		Very light blue		No

1 - Door  
2 - Less than 500 SF

**Client:** HRCE  
**Location:** #75 : Office  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 96

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client: HRCE**  
**Location: #76 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 204**

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		92(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		96(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #76 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 204**

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Drywall and joint compound	96		SF		Sea blue		No	

- 1 - Door
- 2 - Less than 500 SF

**Client: HRCE**  
**Location: #76 : Office**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 204**

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

- 1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #77 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		224(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		224(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #77 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #77 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #77 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #78 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 42

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		42(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" brown with white streak			A	Y		41(7)			SF	V0008	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor		Vinyl Floor Tile and Mastic, 12" peach with white flecks			A	Y		1(7)			SF	V0020	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #78 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 42

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Wood					Lime green		No	

1 - Door  
2 - Less than 500 SF

**Client:** HRCE  
**Location:** #78 : Washroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 42

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #79 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

PAINT								
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Other <sup>1</sup>	Wood							No

1 - Door

**Client:** HRCE  
**Location:** #79 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #79 : Custodian Supply Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 146

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

Client: HRCE  
Location: #80 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling		Drywall and joint compound			C	Y		224(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Floor <sup>1</sup>		Terrazzo, Pebble pattern			A	Y		224(7)			SF	V9500	Presumed Asbestos		Presumed Asbestos	NF

1 - Sampling would be too destructive

Client: HRCE  
Location: #80 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

Client: HRCE  
Location: #80 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

Client: HRCE  
Location: #80 : Washroom  
Survey Date: 2024-03-05

Site: 1 Regan Drive, Halifax, NS  
Floor: 3

Building Name: Rockingstone School  
Room #:  
Last Re-Assessment: 0000-00-00

Area (sqft): 224

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #81 : Machine Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 320

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Piping		Parging Cement	Elbow		B	Y		6(7)			EA	V0010	Chrysotile	50-75%	Confirmed Asbestos	F
Wall		Drywall and joint compound			A	Y		720(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #81 : Machine Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 320

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Metal							No	

1 - Door

**Client:** HRCE  
**Location:** #81 : Machine Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 320

PB PRODUCTS				
Component	Quantity	Unit	Sample	Hazard
Batteries In Emer. Lights	1	EA	V9500	Presumed

**Client:** HRCE  
**Location:** #81 : Machine Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 320

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**ASBESTOS - NO ACCESS**

System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**PB PRODUCTS - NO ACCESS**

Component	Quantity	Unit	Sample	Hazard
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**MERCURY - NO ACCESS**

Component	Quantity	Unit	Sample	Hazard
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**PCB - NO ACCESS**

Component	Quantity	Unit	Sample	Sample Description	Amount	PCB
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**ODS - NO ACCESS**

Component	Type	Quantity	Unit	Sample	Hazard
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**MOULD - NO ACCESS**

System	Material	Visible	Quantity	Unit	Sample Type	Sample No	Sample Description	Mould
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Locked and custodians did not have access

**Client:** HRCE  
**Location:** #82 : Classroom  
**Survey Date:** 2024-03-05  
2024-04-16

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 0

**TANK - NO ACCESS**

Locked and custodians did not have access

**Client: HRCE**  
**Location: #83 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 112**

**ASBESTOS**

System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		104(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		112(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		300(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client: HRCE**  
**Location: #83 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 112**

**PAINT**

System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard
Other <sup>1</sup>	Wood							No

1 - Door

**Client: HRCE**  
**Location: #83 : Hallway**  
**Survey Date: 2024-03-05**

**Site: 1 Regan Drive, Halifax, NS**  
**Floor: 3**

**Building Name: Rockingstone School**  
**Room #:**  
**Last Re-Assessment: 0000-00-00**

**Area (sqft): 112**

**MERCURY**

Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #84 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1048

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		996(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		1048(7)			SF	S0017C	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		442(7)	6(7)	2(3)	SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #84 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1048

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #84 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 1048

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #85 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 544

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		540(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		544(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		442(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #85 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 544

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #85 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 544

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #86 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		938(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" blue with white and blue flecks			A	Y		950(7)			SF	V0017	[Asbestos]		[Asbestos]	NF
Wall		Drywall and joint compound			A	Y		419(7)	1(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF
Wall		Drywall and joint compound			A	Y		420(7)			SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #86 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	
Wall <sup>2</sup>	Concrete (poured)	420		SF	V9500	Dark grey		Presumed Lead	

- 1 - Door
- 2 - No discreet place to sample

**Client:** HRCE  
**Location:** #86 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 950

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

- 1 - LED



CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #87 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		660(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		297(7)	3(7)		SF	V0002	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #87 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #87 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #88 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		660(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Wall		Drywall and joint compound			A	Y		294(7)	6(7)		SF	S0002F	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #88 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #88 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #89 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		660(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		660(7)			SF	V0009	[Asbestos]		[Asbestos]	NF

**Client:** HRCE  
**Location:** #89 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #89 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #90 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		660(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" white with blue flecks			A	Y		660(7)			SF	V0009	[Asbestos]		[Asbestos]	NF

**Client:** HRCE  
**Location:** #90 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #90 : Classroom  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 660

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	
Thermostat	1	EA	V0000	

1 - LED

CONFIRMED AND PRESUMED HAZARDOUS MATERIALS REPORT

**Client:** HRCE  
**Location:** #91 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

ASBESTOS																
System	Component	Material	Item	Covering	A*	V*	AP*	Good	Fair	Poor	Unit	Sample	Asbestos Type	Amount	Hazard	Friable
Ceiling	Acoustic Tile	Ceiling Tiles (lay-in), 24" x 24" pinhole			C	N		90(7)			SF	V0006	Amosite	0.5-5%	Confirmed Asbestos	PF
Floor		Vinyl Floor Tile and Mastic, 12" beige with tan streaks			A	Y		90(7)			SF	V0025	Chrysotile	0.5-5%	Confirmed Asbestos	NF

**Client:** HRCE  
**Location:** #91 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

PAINT									
System	Item	Good	Poor	Unit	Sample	Sample Description	Amount	Hazard	
Other <sup>1</sup>	Wood							No	

1 - Door

**Client:** HRCE  
**Location:** #91 : Storage Room  
**Survey Date:** 2024-03-05

**Site:** 1 Regan Drive, Halifax, NS  
**Floor:** 3

**Building Name:** Rockingstone School  
**Room #:**  
**Last Re-Assessment:** 0000-00-00

**Area (sqft):** 90

MERCURY				
Component	Quantity	Unit	Sample	Hazard
Light Fixture <sup>1</sup>			V0000	

1 - LED

## 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.
L	The material is partially visible to view when standing on the floor of the room and requires the removal of a building component (e.g. ceiling system or access panels) to view completely and access. Includes partially viewed access points to crawlspaces, attic spaces, etc. without entering. Observations are 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.

Colour Coding	
	The material is a hazardous material, either by analytical results or by visible identification.
	The material is presumed to be a hazardous material, based on visual appearance, and was not sampled due to limited access or the non-destructive nature of sampling.

<b>Action</b>			
(1)	Clean up of ACM Debris	(2)	Precautions for Access Which may Disturb ACM Debris
(4)	Precautions for Work Which may Disturb ACM in Poor Condition	(5)	Proactive ACM removal (Minimum repair required for fair condition)
(7)	Management program and surveillance	(3)	ACM removal
		(6)	ACM repair

**APPENDIX VII**  
**Photographs**





V0002 (Confirmed Asbestos), Wall, Drywall and joint compound, Custodian Room (Location #: 1)



V0006 (Confirmed Asbestos), 24" x 24" pinhole, Ceiling, ACOUSTIC TILE, Ceiling Tiles (lay-in), Classroom (Location #: 71)



S0008B (Confirmed Asbestos), 12" brown with white streak, Floor, Vinyl Floor Tile and Mastic, Storage Room (Location #: 17)



S0009C (Confirmed Asbestos), 12" white with blue flecks, Floor, Vinyl Floor Tile and Mastic, Custodian Room (Location #: 1)





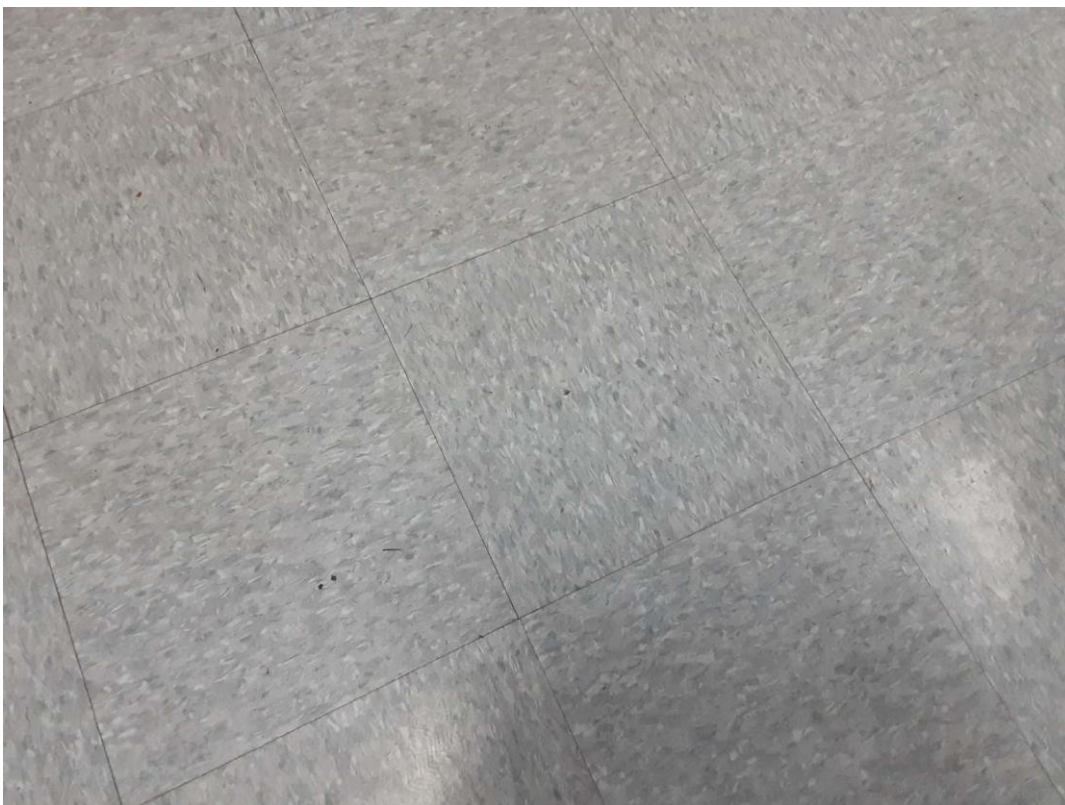
S0010A (Confirmed Asbestos), Piping, Parging Cement, Boiler Room (Location #: 12)



S0011C (Confirmed Asbestos), Mechanical Equipment, Heating Water Tank, Thermal Insulation, Boiler Room (Location #: 12)



S0014A (Confirmed Asbestos), 12" tan with off white streak, Floor, Vinyl Floor Tile and Mastic, Gymnasium Office (Location #: 20)



S0017A (Confirmed Asbestos), 12" blue with white and blue flecks, Floor, Vinyl Floor Tile and Mastic, Office (Location #: 32)





S0019A (Confirmed Asbestos), 12" off white with tan streak, Floor, Vinyl Floor Tile and Mastic, Office (Location #: 44)



S0020A (Confirmed Asbestos), 12" peach with white flecks, Floor, Vinyl Floor Tile and Mastic, Custodian Supply Room (Location #: 50)



S0022A (Confirmed Asbestos), White caulking, Wall, Door, Caulking, Exterior (Location #: 66)

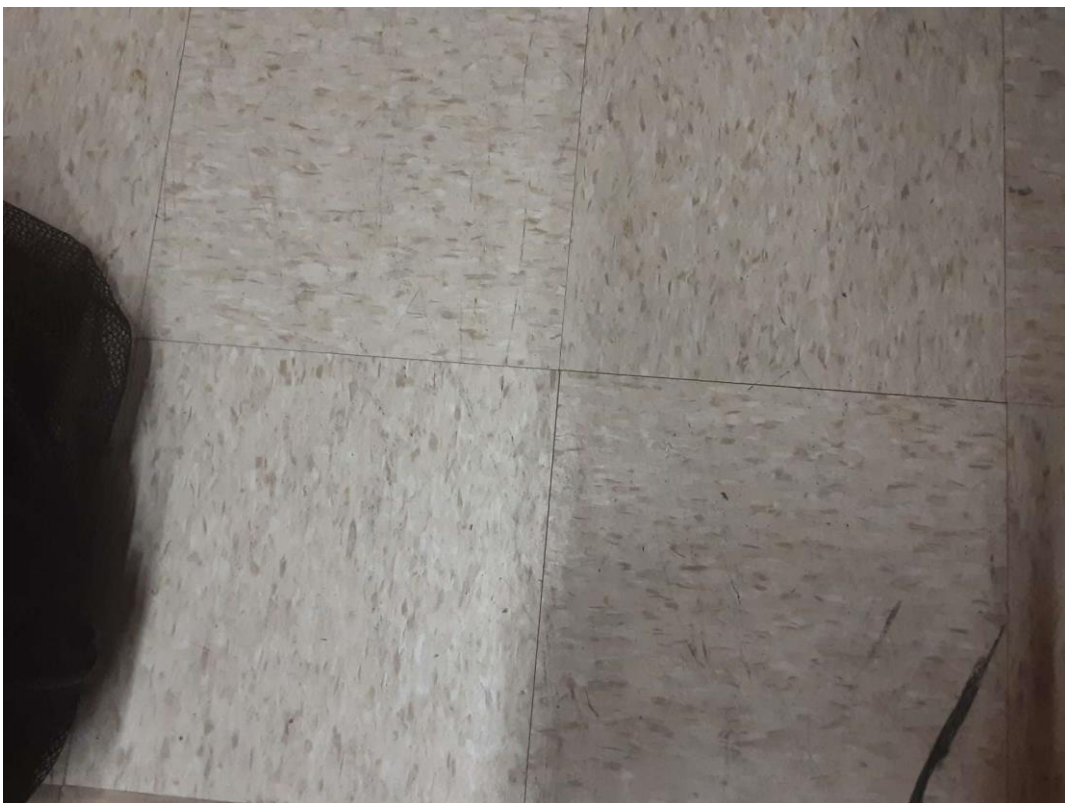


S0024 (Confirmed Asbestos), Other, Sink, Mastic, Gold, Staff Room (Location #: 47)

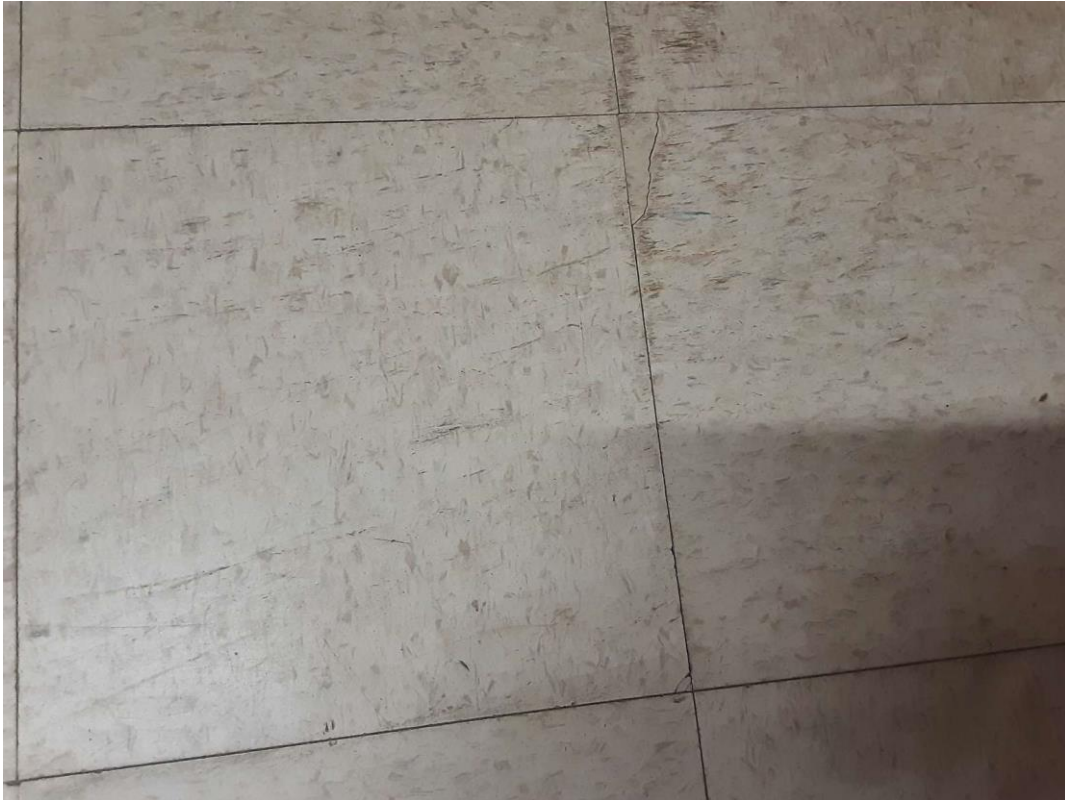




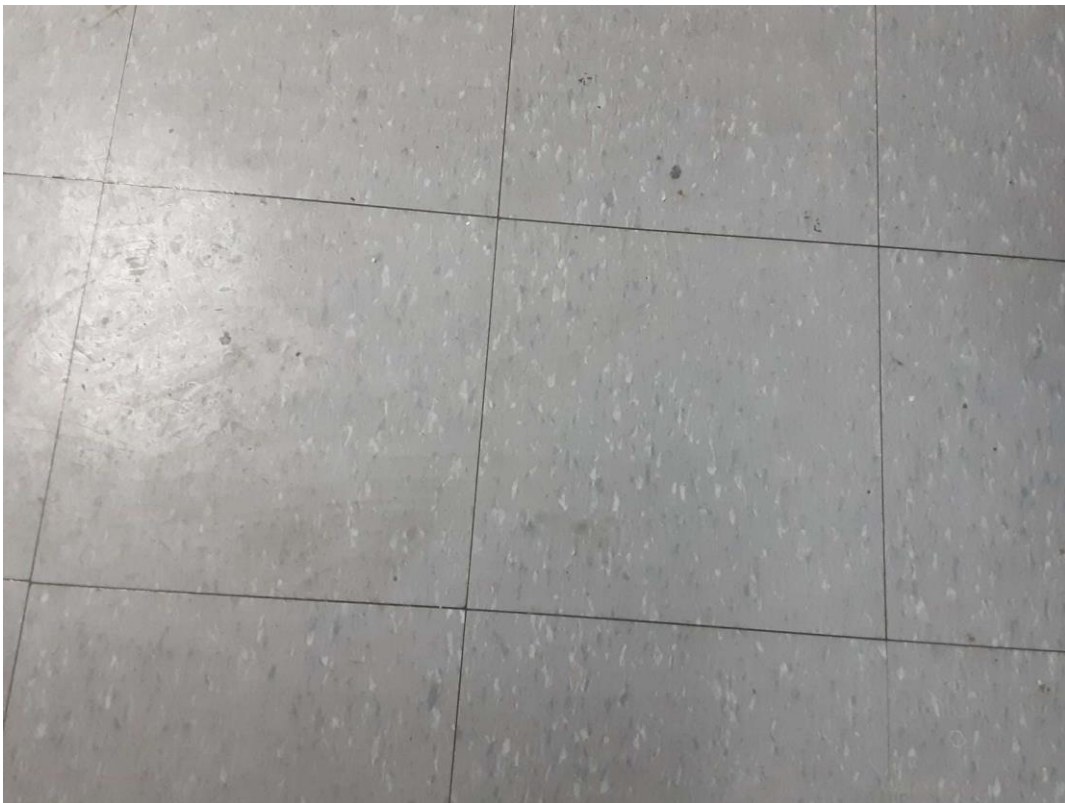
S0025A (Confirmed Asbestos), 12" beige with tan streaks, Floor, Vinyl Floor Tile and Mastic, Classroom (Location #: 59)



V9500 (Presumed Asbestos), 12" off white with brown and white flecks, Floor, Vinyl Floor Tile and Mastic, Gymnasium Equipment Room (Location #: 10), No discreet place to sample



V9500 (Presumed Asbestos), 12" off white with brown flecks, Floor, Vinyl Floor Tile and Mastic, Gymnasium Equipment Room (Location #: 10), No discreet place to sample



V9500 (Presumed Asbestos), 12" blue with white and dark blue flecks, Floor, Vinyl Floor Tile and Mastic, Classroom (Location #: 14), No discreet place to sample





V9500 (Presumed Asbestos), Pebble pattern, Floor, Terrazzo, Washroom (Location #: 2)



V9500 (Presumed Asbestos), 12" beige with brown marks, Floor, Vinyl Floor Tile and Mastic, Washroom (Location #: 34)  
No discreet place to sample



V9500 (Presumed Asbestos), 12" brown, Floor, Vinyl Floor Tile and Mastic, Hallway And Lobby (Location #: 36)  
No discreet place to sample



V9500 (Presumed Asbestos), 12" purple with dark purple flecks, Floor, Vinyl Floor Tile and Mastic, Staff Room (Location #: 47)





V9500 (Presumed Asbestos), 12" grey tiles, Floor, Thin-set under ceramic tiles, Stairwell (Location #: 67)



V9500 (Presumed Asbestos), 12" off white with blue and brown flecks, Floor, Vinyl Floor Tile and Mastic, Gymnasium (Location #: 9) No discreet place to sample

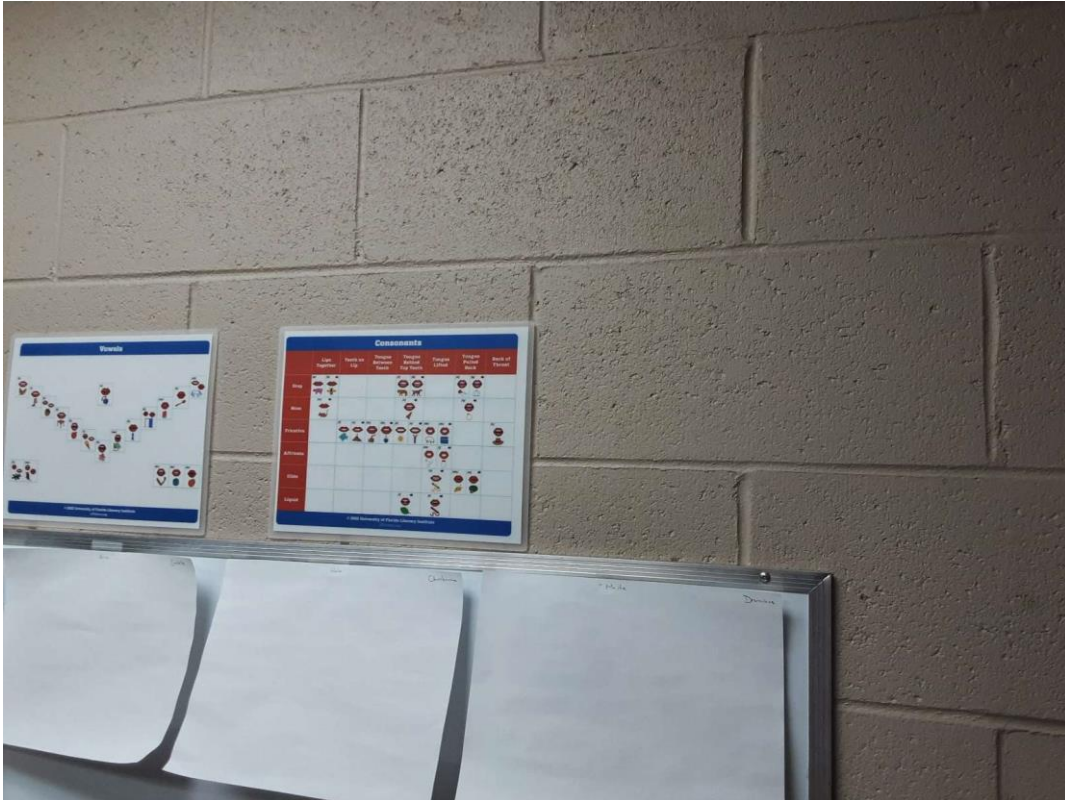


V9500 (Presumed Asbestos), 12" orange with dark orange flecks, Floor, Vinyl Floor Tile and Mastic, Gymnasium (Location #: 9) No discreet place to sample



L0005 (Lead, Low), Black paint, Wall, Gymnasium Stage (Location #: 8)





L0013 (Lead, Low), Pink paint, Wall, Library Supply Room (Location #: 40)



V9500 (Presumed Lead), Structure, White paint, Custodian Room (Location #: 1)  
Too high to sample



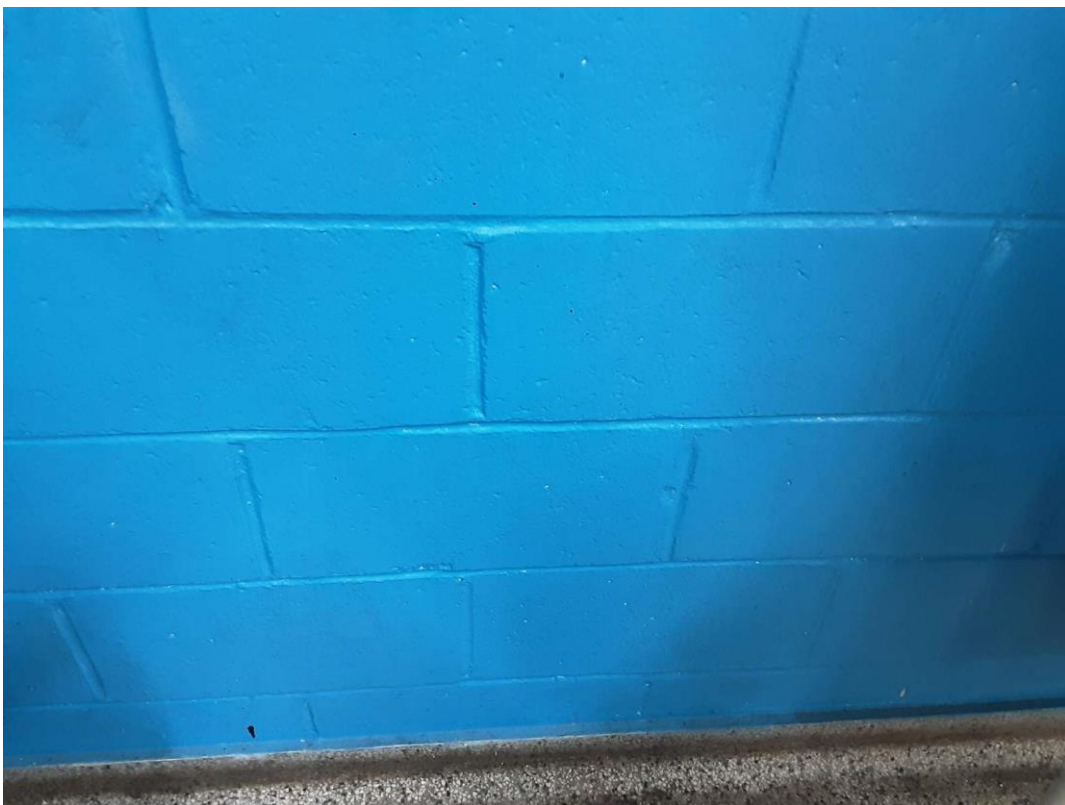
V9500 (Presumed Lead), Blue paint, Wall, Classroom (Location #: 14)  
No discreet place to sample



V9500 (Presumed Lead), Light purple, Wall, Classroom (Location #: 14)  
No discreet place to sample



V9500 (Presumed Lead), Teal paint, Wall, Classroom (Location #: 22)  
No discreet place to sample



V9500 (Presumed Lead), Blue, Wall, Washroom (Location #: 49)  
No discreet place to sample



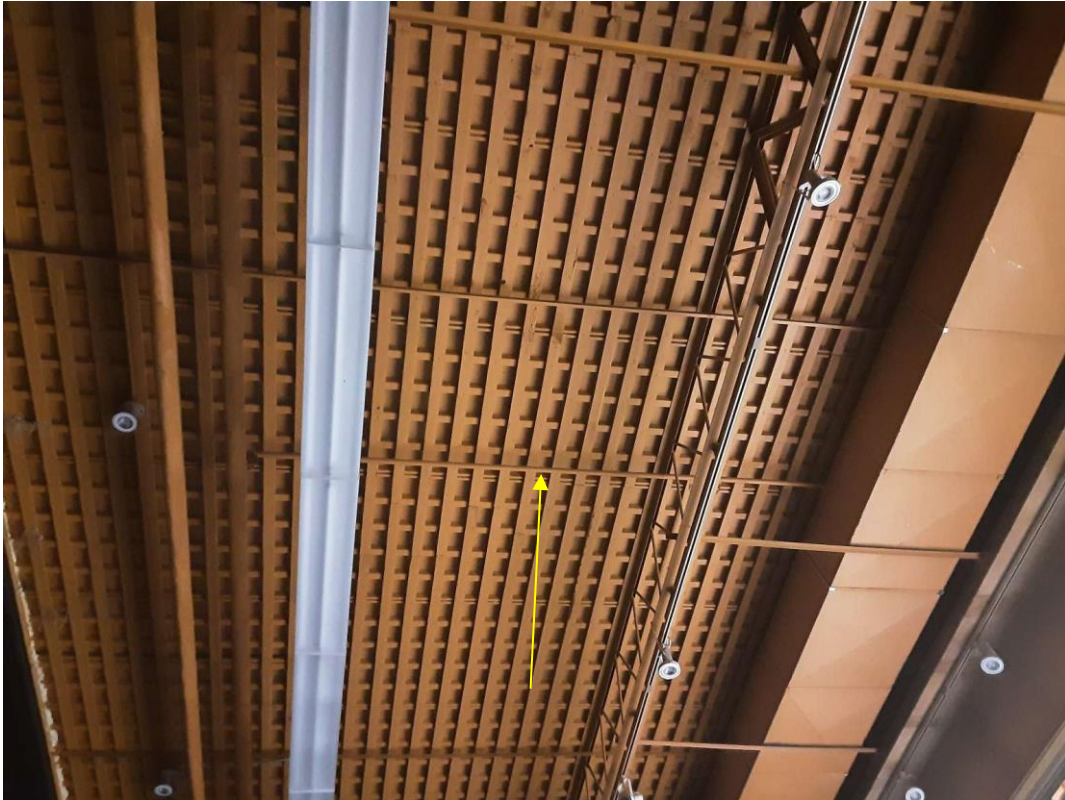


V9500 (Presumed Lead), Purple, Wall, Classroom (Location #: 53)  
No discreet place to sample

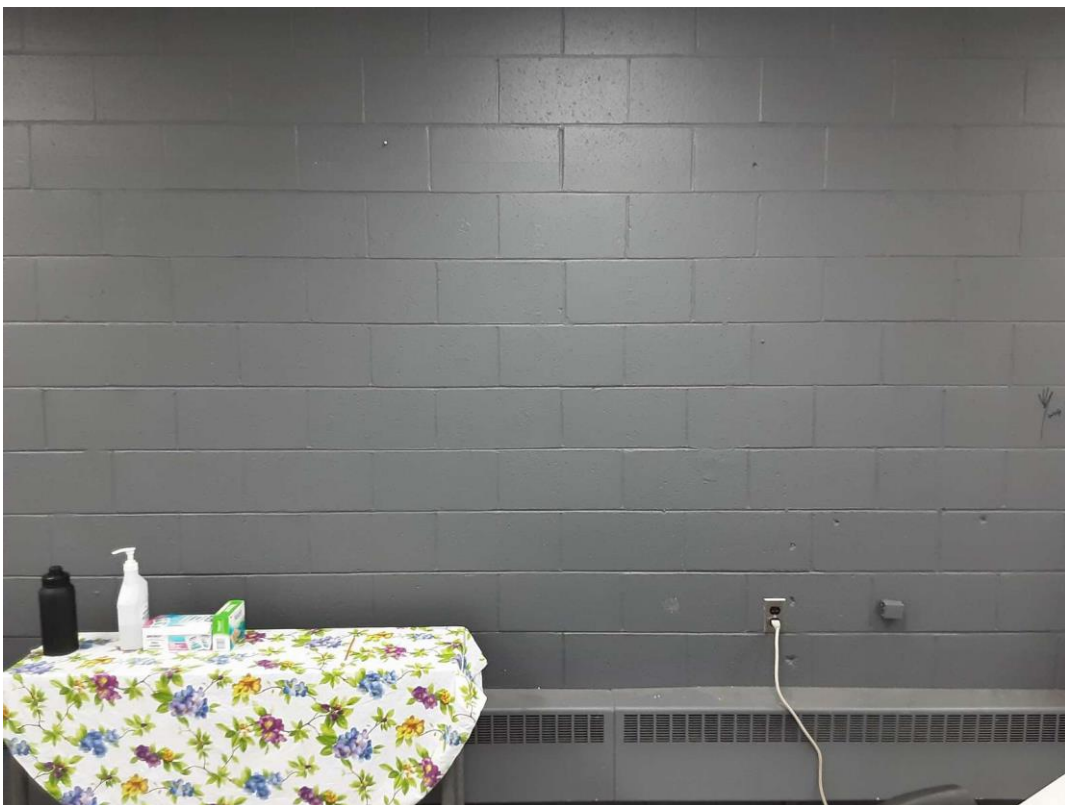


V9500 (Presumed Lead), Green, Floor, LAN Room (Location #: 7)  
No discreet place to sample





V9500 (Presumed Lead), Orange paint, Structure, Gymnasium Stage (Location #: 8)  
Too high to sample



V9500 (Presumed Lead), Dark grey, Wall, Classroom (Location #: 86)  
No discreet place to sample



**Halifax**  
Regional Centre for Education

**FINAL**  
**Asbestos**  
**Management Program**  
HRCE Facilities

Prepared for:

**Halifax Regional Centre for  
Education**  
33 Spectacle Lake Drive  
Dartmouth, Nova Scotia B3B 1W8

August 28, 2023

Pinchin File: 322126.000



## IMPORTANT CONTACTS

### HRCE and Facility Management Contacts

Title/Function	Contact Name	Phone	Email
AMP Facilitator	Geoffrey Olsson	902.220.1290,	Geoff.olsson@HRCE.ca
AMP Facilitator Back-up	Kavita Khanna	902.237.0247,	kkhanna@HRCE.ca
After hours emergency reporting	After hours manager on call	902.493.5110	

### Pinchin Contacts

Contact Name	Phone	Email
Jackson Munro	902.220.7203	<a href="mailto:jmunro@pinchin.com">jmunro@pinchin.com</a>
After Hours Emergency Line	1.800.577.2653	

### Approved Abatement Contractors

Company	Contact Name	Phone	Email
First On Site	Jason Kerrivan	902.434.7199	<a href="mailto:jkerrivan@firstonsite.ca">jkerrivan@firstonsite.ca</a>



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**APPENDICES**

GLOSSARY

APPENDIX A	Letter of Notification to Tenants Regarding Asbestos in Premises
APPENDIX B	Contractor Notification and Acknowledgement Form
APPENDIX C	Response to Disturbance of Asbestos
APPENDIX D	Asbestos Project Work Record
APPENDIX E	Reassessment of ACM
APPENDIX F	Classifications of Abatement Work
APPENDIX G	Site Specific Report(s)
APPENDIX H	Site Specific Contacts



## **1.0 INTRODUCTION**

Halifax Regional Centre for Education (HRCE) is committed to protect the health and safety of workers and occupants. This Asbestos Management Program (AMP) has been developed to meet responsibilities as an employer, and as a building owner to manage operational issues respecting asbestos and to maintain compliance with applicable regulations for disturbance of asbestos-containing materials (ACM) during demolition, renovation, alteration, maintenance, repair or other activities.

## **2.0 SCOPE**

The AMP provides information and procedures for Asbestos Management of all HRCE owned or occupied facilities in Nova Scotia.

The AMP applies to all HRCE staff as well as all service providers and contractors performing work in HRCE facilities.

The AMP outlines requirements for HRCE personnel involved in acquisition of property which may contain ACM. It applies to all categories of property with the exception of vacant lands. If HRCE decides to lease property in the future ACM should be considered when developing their lease agreement and this AMP should be amended to address leased properties occupied by the HRCE.

The AMP is a management system to control the disturbance of ACM during demolition, renovation, alteration, maintenance, repair or other activities.

The AMP incorporates the following elements:

- Asbestos Assessments and Reassessments.
- Regulatory Requirements and HRCE Policies.
- Roles and Responsibilities.
- Notifications.
- Training Requirements.
- Emergency Reaction and Procedures.
- Record Keeping.
- Contractor Requirements.

## **3.0 OBJECTIVE**

The AMP is a management system primarily intended to identify ACM and control disturbance of ACM by using proper procedures during demolition, renovation, alteration, maintenance, repair or other activities. The objective in preparing and instituting this AMP is to ensure that known or suspected ACM is managed



so that maintenance staff, construction workers and occupants are safeguarded in accordance with applicable regulations.

#### **4.0 BACKGROUND INFORMATION AND HEALTH EFFECTS**

The following is a very brief summary of the hazards and health effects from asbestos exposure:

- Occupational exposure to asbestos can cause fatal lung disease.
- Asbestos must become airborne and be inhaled to be hazardous. A physical disturbance or direct contact with ACM is required to cause it to become airborne. The mere presence of asbestos is not hazardous.
- Asbestos may remain in buildings so long as it is in good condition and undisturbed. No Provincial or Federal Regulations require the removal of ACM as long as it is enclosed, encapsulated or managed appropriately and removed prior to building demolition.

#### **5.0 REGULATORY REQUIREMENTS AND HRCE POLICIES**

##### **5.1 Regulatory Requirements**

This AMP was implemented in response to the following legislation in effect as of August 28, 2023.

All building operations, whether performed by HRCE, or service providers, shall adhere to the requirements outlined in this document and all applicable regulations, guidance documents and acceptable professional standards.

The following regulations and guidelines were in place at the time this AMP was prepared:

1. Occupational Health and Safety Act, N.S. Reg. 52/2013.
2. A Guide to Removal of Friable Asbestos-Containing Material.
3. A Guide to Assessment and Management of Asbestos in the Workplace.
4. Asbestos Waste Management Regulations, N.S. Reg. 53/95

#### **6.0 HRCE POLICIES RELATED TO ASBESTOS**

HRCE has established the following policies related to asbestos independent of applicable regulations:

- HRCE may opt for removal of ACM with minor damage as opposed to repair or encapsulation when cost-effective unless removal is not practicable. ACM with major damage must be removed.
- At existing leased properties where HRCE is a tenant, when ACM is discovered during any improvement, addition, renovation, demolition, maintenance, repair of any kind, or at





any other time, the Owner (Landlord) shall promptly remove the ACM from the leased premises, if possible within the existing lease agreement.

- HRCE may perform Low Risk asbestos operations, where appropriately trained to perform the work.
- All Moderate and High asbestos operations must be undertaken by an Asbestos Abatement Contractor. Asbestos Abatement Contractors may also perform Low Risk asbestos operations.

## **7.0 ASBESTOS-CONTAINING MATERIALS AT HRCE FACILITIES**

Refer to the individual Asbestos Assessment or subsequent Asbestos Reassessment Reports prepared for the Facility, provided in Appendix G. In some cases, Hazardous Materials Assessment or Designated Substance Survey Reports have been prepared and these reports include information regarding asbestos and other hazardous materials (e.g. lead, mercury, silica, and PCBs).

All assessment reports or subsequent Asbestos Reassessment Reports have been, or will be, prepared to comply with applicable asbestos regulations and this AMP.

Asbestos Assessment Reports are key components of this AMP, as the reports define the locations of ACM and Presumed ACM (PACM) present in the facility, the condition of ACM, the friability, the type of asbestos and the approximate quantity.

### **7.1 Asbestos Assessments**

Refer to the Asbestos Assessment or Hazardous Building Materials Assessment Report in Appendix G for further information on the methodology of the assessment(s) completed for the Facility.

HRCE will engage a Consultant to perform asbestos assessments for all facilities. The report is to be completed following a methodology compliant with applicable regulations and acceptable professional standards. The report must comment on the condition of the ACM, include recommendations for remedial action, and is to include the risk classification for any abatement required.

In facilities which are leased, copies of the initial asbestos assessment, and any subsequent reassessments, shall be provided by the Owner to HRCE, and maintained on Site, or HRCE will have an asbestos assessment report prepared and complete subsequent reassessments, limited to the leased space.

### **7.2 Reassessment of ACM**

All ACM and PACM identified in the Facilities will be inspected at reasonable intervals, and at minimum annually, a reassessment of all ACM and PACM will be completed with written documentation.





The reassessment of ACM and PACM will be completed by a Consultant (Qualified Person) or HRCE staff, using the form provided in Appendix E.

#### *7.2.1 Reassessment in Unassessed Areas*

Where assessments have been completed in only a portion of schools, all non-sampled materials (including but not limited to ceiling tiles, vinyl floor tiles, vinyl sheet floor, etc.) are to be presumed to contain asbestos, and reassessed during their yearly inspection of the suites.

When feasible, arrangements should be made to access previously unassessed areas during the annual reassessments. If during any annual or other inspections, materials not previously sampled are found to be damaged (spalling finishes, debris, etc.), samples are to be collected and the material is to be identified as asbestos or non-asbestos. Remedial action and removal procedures are to be decided accordingly if the materials are found to contain asbestos.

### **7.3 Distribution of Assessment and Reassessment Reports**

HRCE will ensure that each assessment and reassessment report is distributed or accessible to the following:

- HRCE JOHSC and/or Occupational Health and Safety Representative (OHS Representative).
- A hard copy will be sent to each facility. Electronic copies will be made available.
- Building Operators, Maintenance Personnel, Janitorial Staff.
- Project Managers or Construction Managers planning or performing work in a HRCE Building.
- Outside contractors that could potentially disturb ACM through their work.

### **8.0 PRE-CONSTRUCTION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Prior to the commencement of any work that requires renovation, construction or demolition, the Facility or specific areas of the Facility to be impacted by the work shall be assessed for ACM, as well as other hazardous building materials (e.g. lead, mercury, silica, and PCBs), (the “**Pre-Construction Hazardous Building Materials Assessment**”).

The Pre-Construction Hazardous Building Materials Assessment must be performed by a Consultant and include destructive or intrusive testing of enclosed areas.

Sampling may include the following:



- Prior to disturbance of materials presumed to contain asbestos listed in the assessment reports, collect samples of materials that were not previously sampled/identified (refer to Asbestos Assessment Report or Hazardous Materials Report).
- Unidentified suspect materials that were not sampled during the initial survey, but which may be present located within enclosed areas such as pipe/duct insulations in ceiling spaces, chases or shafts. If such areas will be affected by the work, entry to these areas and sampling of suspect materials shall be performed.
- Assessment of existing visible floor, wall and ceiling finishes to assess and sample concealed finishes (e.g., vinyl flooring under carpet or other vinyl flooring, drywall over plaster, etc.)
- Other hazardous building materials shall be sampled and analyzed or identified prior to disturbance as required by provincial regulatory requirements. Other hazardous building materials may include lead, mercury, silica, polychlorinated biphenyls, mould, etc.

Upon receiving the Pre-Construction Hazardous Building Materials Assessment report, if asbestos and/or other hazardous building materials are present in the area, specifications (large scale projects) or a scope of work (small scale projects) for removal shall be prepared, provided, and reviewed by the Constructor or contractor prior to any renovation, construction, or demolition work.

HRCE will employ an Abatement Contractor to perform abatement of other hazardous materials and/or ACM that may be disturbed by construction, renovation, or demolition work using appropriate regulated procedures.

## **9.0 REMEDIAL WORK – DAMAGED MATERIALS**

Where damage is observed, HRCE will refer to the existing Asbestos or Hazardous Building Materials Assessment or subsequent Asbestos Reassessment Reports (as required) to determine if the damaged materials are ACM or PACM.

Where damaged suspected asbestos-containing materials are not included in the existing Asbestos or Hazardous Building Materials Assessment Report(s), an assessment and/or sampling of these damaged materials must be conducted prior to repair of damage, unless materials are treated as ACM, and appropriate asbestos operations are followed.

If damaged materials contain asbestos and the regulated abatement procedure to be used is not detailed in the recommendations section of the existing Asbestos or Hazardous Building Assessment Materials report, HRCE will contact a Consultant to determine applicable asbestos abatement procedures and to develop a scope of work and performance specifications, as required.



HRCE will employ an Abatement Contractor to perform the remedial work required (removal of damaged ACM) and a Consultant to perform inspection and air monitoring as soon as practicable upon receiving the report/notice of damage.

## **10.0 NOTIFICATION**

### **10.1 Notification to Occupants**

HRCE will inform the JOSHC of any planned sampling, assessment or abatement work that is to be conducted within the applicable HRCE building(s) to ensure that all aspects of committee involvement are complied with.

Tenants must be notified of ACM in their leased space and in common areas of the building that they have access to and may disturb the ACM.

HRCE will notify all new tenants of the presence of ACM in the space they are occupying. Notification is to be completed prior to occupancy via the tenant lease agreement.

Upon institution of this AMP, and upon completion of asbestos assessments in a recently assessed or recently purchased property, where tenants have not been notified via their lease agreement, HRCE will notify occupants of the presence of asbestos in the space they are occupying.

### **10.2 Notification of Contractors**

Contractors that perform work which may disturb ACM within the Facility must be notified of the presence of asbestos (by providing the Asbestos or Hazardous Building Materials Assessment Report). Notification will be sent to these parties prior to project or maintenance work (e.g. janitorial, telephone, cable, etc.).

Contractors are to inform all sub-trades of the presence of all ACM or PACM identified in the work area and include this information in their respective contract agreement.

If suspect ACM not identified in the contract agreement is discovered during the course of the work, the Contractors are to stop all work which might disturb the suspect ACM and notify the appropriate HRCE personnel (i.e. Property Manager and/or Project Manager as applicable) or Constructor, as the case may be.

Prior to performing work, contractors must complete and return the Contractors Notification Package (Appendix B) and HRCE will maintain acknowledgement forms from these packages.

### **10.3 Notification of Maintenance Personnel**

HRCE will inform their own staff that will perform janitorial work, maintenance work or project work of the presence of asbestos in the Facility in which they are working. This will be completed by providing access



to the AMP and the most recent Asbestos Assessment or Hazardous Building Materials Assessment Report and training.

#### **10.4 Notification of Project Managers, Architects and Engineers**

HRCE will inform their project managers, architects and engineers of the presence of asbestos in the facility in which they are arranging for or planning work. This will be completed by providing access to the AMP, and the most recent Asbestos Assessment or Hazardous Building Materials Assessment Report.

#### **10.5 Notification of Authorities Having Jurisdiction**

Regulations in place at the time of this AMP development do not require notifications regarding asbestos-containing materials, except for:

- A major release of a hazardous substance (per Section 63 of the Occupational Health and Safety Act).

### **11.0 TRAINING REQUIREMENTS**

HRCE will employ a Consultant to ensure staff have received appropriate training.

HRCE employees which will not undertake asbestos abatement work or will not disturb asbestos may be provided training including the following:

- Health effects of asbestos exposure.
- Overview of the existence of applicable regulations and risk classification.
- Identification of common types of ACM (so as to not disturb them).
- Understanding a typical asbestos survey report.
- Their responsibilities under the policies in this AMP and Regulations.

HRCE employees will undertake asbestos abatement work shall receive training including the following:

- Health effects of asbestos exposure.
- Applicable regulations and risk classification.
- Identification of common types of ACM.
- Asbestos Work Procedures limited to Low Risk Operations.
- Understanding a typical asbestos survey report.
- Their responsibilities under the policies in this AMP and Regulations.

HRCE will maintain a record of training of their employees.



HRCE requires all service providers, contractors, etc. to provide appropriate training to all workers who perform work in HRCE Facilities which will, or potentially may, disturb ACM.

## **12.0 RESPONSE TO DISTURBANCE OF ASBESTOS, PROCEDURES AND CONTACTS**

HRCE staff and contractors may encounter fallen material that is suspected confirmed to contain asbestos or uncover a material that was previously unidentified and is suspected to contain asbestos. HRCE staff and contractors shall follow the protocol “Response to Disturbance of Asbestos” in Appendix C.

## **13.0 CLASSIFICATION OF ABATEMENT WORK**

Refer to Appendix F for the classification of asbestos work.

## **14.0 INSPECTION AND AIR MONITORING OF ASBESTOS WORK**

### **14.1 Visual Inspection**

The primary method of ensuring compliance when conducting asbestos removal or abatement work is visual inspection of the site and work practices by a Competent Worker or Asbestos Consultant.

### **14.2 Air Monitoring During Asbestos Work**

Per the “Asbestos in the Workplace: A Guide to the Removal of Friable Asbestos Containing Material” dated November 21, 2013:

- During the removal of friable asbestos-containing materials, where a Glove Bag is not used, and the air from the enclosure is exhausted inside the building, daily air sampling is required outside the enclosure.
- At the completion of removal of friable asbestos-containing materials, clearance air sampling must be performed prior to dismantling of the site isolation and engineering controls.

Air sampling above the regulatory requirements may be performed, as identified in the following sections.

Air monitoring and analysis during asbestos removal or abatement will be performed using Phase Contrast Microscopy (PCM) following the NIOSH 7400 method. PCM air samples must be submitted for analysis to a laboratory participating in a recognized quality control program such as the AIHA Asbestos Analysts Testing (AAT) Program or the Quality Control Program of the IRSST (the Institut de recherche Robert-Sauvé en santé et en sécurité du travail).



The PCM method does not characterize the types of fibres present. In cases where elevated fibre concentrations are identified, or the actual asbestos concentration is required, Transmission Electron Microscopy following the NIOSH 7402 method may be used.

The acceptable limit for PCM samples is as follows:

- as low as reasonably achievable (ALARA) outside the work area, and/or 0.01 fibres/cubic centimetre (f/cc).
- 0.01 f/cc for clearance air sampling.

Where TEM analysis is performed, the acceptable limits would be 0.01 asbestos fibres/cubic centimeter.

### **14.3 Low Risk – Inspection and Air Monitoring**

#### *14.3.1 Inspection*

The Project Manager, an assigned Competent Worker, or an Abatement Consultant, will inspect the work upon completion of work to ensure all ACM has been removed and the area adequately cleaned of dust and debris.

#### *14.3.2 Air Monitoring*

Air monitoring is not required; however, projects may be evaluated on a case by case basis, and air sampling performed where desired.

### **14.4 Moderate Risk and Glove Bag – Inspection and Air Monitoring**

#### *14.4.1 Inspection*

An Abatement Consultant will perform daily inspections throughout the abatement, and inspect the work upon completion of work to ensure all ACM has been removed and the area adequate cleaned of visible dust and debris. Upon completion of inspection and air monitoring (if required) by the Abatement Consultant, the site isolation may be dismantled.

The Project Manager or an assigned Competent Worker may inspect for final cleanliness after the site isolation has been dismantled.

#### *14.4.2 Air Monitoring*

PCM air monitoring will be conducted daily and at completion of abatement. Air monitoring will be conducted in occupied areas adjacent to the Asbestos Work Area or Glove Bag Work Area during contaminated work.



PCM air monitoring will be used for air clearance within the Asbestos Work Areas prior to re-occupancy. Where enclosures have been constructed to define the Asbestos Work Area, aggressive clearance air sampling will be performed.

## **14.5 High Risk – Inspection and Air Monitoring**

### *14.5.1 Inspection*

An Abatement Consultant will perform daily inspections throughout the abatement, and inspect the work upon completion of work to ensure all ACM has been removed and the area adequately cleaned of visible dust and debris. Upon completion of inspection and air monitoring by the Consultant, the site isolation may be dismantled.

The Project Manager or an assigned Competent Worker may inspect for final cleanliness after the site isolation has been dismantled.

### *14.5.2 Air Monitoring*

PCM air monitoring will be conducted on a daily basis.

Air monitoring will be conducted at the perimeter of the Asbestos Work Area (in occupied areas adjacent to the Work Area) to ensure no leakage from the enclosure.

Aggressive clearance air monitoring must be performed within the Asbestos Work Areas. Where PCM samples fail to meet the 0.01 f/cc criteria:

- Contractors may be requested to reclean the Asbestos Work Areas, or;
- Transmission Electron Microscopy (TEM) may be used.

Once the clearance air testing is satisfactory:

- a. The site isolation and engineered controls may be removed.
- b. A copy of the air sample report is to be:
  - a. provided and maintained on site by the Contractor, when abatement work is part of a project;
  - b. provided to the Owner, and a copy is kept on file;
  - c. provided to the JOHSC or the OHS representative, if any, for the workplace and for the building



## **15.0 RECORD KEEPING AND DOCUMENTATION RETENTION**

HRCE will keep the following records:

- Asbestos and / or Hazardous Building Materials Assessment Reports.
- Reassessment Reports.
- Tenant Notification Letters and dates posted or transmitted.
- Contractor Notification Packages and Acknowledgement Forms.
- Asbestos Project Work Records.
- Consultant Asbestos Abatement Completion Reports (including Daily Inspection and Air Monitoring Reports).
- Bulk sample analytical results from any sampling.
- Emergency response project records.

## **16.0 CONSULTANT QUALIFICATIONS**

Consultants employed by HRCE for asbestos work are to meet the following minimum requirements:

- Display competency in asbestos and hazardous materials consulting
- Maintain a health and safety management system that meets provincial standards.
- Maintain a Comprehensive General Liability Policy, with a minimum of \$5,000,000 in coverage.
- Maintain an Errors and Omissions Policy, with a minimum of \$5,000,000.
- Maintain an Automobile or Fleet Policy, and Non-Owned Automobile Policy with a minimum of \$2,000,000 in coverage.
- Maintain valid provincial worker's compensation coverage
- Accredited to analyze PCM air samples or use an accredited laboratory.

## **17.0 ASBESTOS ABATEMENT CONTRACTOR QUALIFICATIONS**

Contractors employed by HRCE are to meet the following minimum requirements:

- Maintain a Comprehensive General Liability Policy, provided on an "occurrence" basis, for a minimum of \$5,000,000 in coverage.
- Maintain an Asbestos Liability or Contractors Pollution Liability Policy, provided on an "occurrence" basis, with a minimum of \$5,000,000 in coverage.





- Maintain an Automobile or Fleet Policy, and Non-owned Automobile Policy with a minimum of \$2,000,000 in coverage.
- Maintain valid provincial worker's compensation coverage.
- All supervisors and workers performing abatement work are to be trained in the procedures being used, health effects or asbestos, applicable personal hygiene procedures, personal protection equipment used and respirator care.
- All workers are to be fit tested for respirators.
- Maintain a health and safety management system that meets provincial standards.

## **18.0 MAINTENANCE AND JANITORIAL WORK**

HRCE personnel and contracted janitorial staff will not:

- Sweep/vacuum in areas of damaged ACM.
- Sweep/vacuum/remove ACM debris.
- Disturb ACM.
- Remove ACM.

HRCE will employ an Abatement Contractor to perform these tasks, where required.

Alternately, HRCE will employ the appropriately trained trade contractor if there is other work to be completed that will disturb ACM (e.g. installing electrical equipment through an asbestos-containing plaster wall).

## **19.0 MAINTENANCE OF THE AMP**

This AMP is to be re-evaluated, and possibly revised, each time there is a substantial change to the any provincial regulation, or policy change. This AMP must be reviewed at least annually and updated as necessary.

## **20.0 ROLES AND RESPONSIBILITIES**

This section defines the roles and responsibilities of HRCE personnel instituting this AMP and provide effective management of ACM at their facilities.

The AMP Facilitator has the primary responsibility to administer the AMP and ensure it is instituted and effective.

The following table summarizes the responsibilities of HRCE personnel:



Reference No.	Responsibility/Task	AMP Section Reference	AMP Facilitator	Facility Manager	Project Team	Client Staff	Consultant
1	Maintenance of the AMP	19.0	X				
2	Employ a Consultant to prepare Asbestos Assessment Reports for any facility where one is not available/prepared	7.1	X	X			
3	Employ a Consultant to prepare Asbestos Assessment Reports in newly purchased facilities	7.1	X	X			
4	Employ a Consultant to reassess facilities where ACM has been confirmed	7.2	X	X			
5	Distribute Asbestos Assessment and Reassessment Reports	7.3	X				
6	Upon receiving assessment and reassessment reports, employ a contractor to perform remedial abatement work to remove damaged ACM. Use applicable provincial procedures	9.0	X	X			
7	As required, prior to performing asbestos work, engage a Consultant to perform inspection and air monitoring	14.0	X	X	X		
8	Ensure that an intrusive pre-construction assessment for ACM is performed prior to any renovation, alteration or demolition	8.0		X	X		X
9	Conduct bulk sampling of suspect materials that have not been sampled or presume the materials to be an ACM	8.0		X	X		X
10	Employ a Consultant (as applicable) to prepare a scope of work prior to large scale abatement as part of construction, renovation or demolition.	9.0		X	X		
11	Provide existing occupants at the outset of this AMP, or occupants in newly purchased facilities, a letter notifying the lessee of ACM within their space, and instruction not to disturb the ACM.	10.1	X	X			



Reference No.	Responsibility/Task	AMP Section Reference	AMP Facilitator	Facility Manager	Project Team	Client Staff	Consultant
12	Ensure all Project Managers, Architects, Engineers and others arranging for, or planning, work in the Facility are provided with the most current asbestos (re)assessment report.	10.4	X	X	X	X	
13	Provide contractors working in HRCE facilities the most current asbestos information and notification via the Contractor Information Package	10.2		X	X	X	
14	Employ a Consultant to train HRCE personnel	11.0	X				
15	Response to an uncontrolled spill or disturbance of asbestos following emergency procedures in Appendix C	12.0	X	X	X	X	
16	Keep all records as required by this program (excepting contractor package acknowledgement)	15.0	X				
17	Keep records of contractor package acknowledgement for each project (contractors to submit via email and keep record)	15.0	X	X	X		
18	Ensure Consultants meet the required qualifications	16.0	X	X	X		
19	Ensure contractors meet the required qualifications	17.0		X	X		X
20	Ensure maintenance and janitorial work is performed so that it does not disturb ACM and unnecessary disturbance of ACM is avoided	18.0				X	
21	Report any unplanned disturbance to ACM or damage to ACM	12.0	X	X	X	X	

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 Master Template for Asbestos Management Program, HAZ, ON Only, February 19, 2020

## **GLOSSARY**

<b>Amended Water</b>	Water with wetting agent added for purpose of reducing surface tension to allow thorough wetting of ACM.
<b>Asbestos-Containing Material(s) (ACM)</b>	Material identified by an appropriate laboratory analytical method (e.g. EPA 600/R-93/116, NIOSH 9000, or NIOSH 9002) to contain at least 0.5% of any type of asbestos, and vermiculite that is identified to contain any amount of asbestos using EPA method 600/R-04/004 if other analytical methods do not identify the presence of asbestos.
<b>Asbestos</b>	Any and all types of asbestos (generally considered as Actinolite; Amosite; Anthophyllite; Chrysotile; Crocidolite; Tremolite, and Libby Amphibole).
<b>Asbestos Work Area</b>	Area where work is being performed which will or may disturb ACM including overspray and fallen material or settled dust that may contain asbestos.
<b>Competent Worker</b>	In relation to specific work, means a worker who, <ul style="list-style-type: none"> <li>• qualified because of that person's knowledge, training and experience to do the assigned work in a manner that will ensure the health and safety of every person in the workplace; and</li> <li>• knowledgeable about the provisions of the Occupational Health and Safety Act and regulations that apply to the assigned work, and the potential or actual danger to health or safety associated with the assigned work.</li> </ul>
<b>Encapsulation</b>	The application of a liquid sealant to asbestos-containing materials; the sealant may penetrate and harden the material (penetrants) or cover the surface with a protective coating (bridging sealants). Also called encasement. This is generally not advisable.
<b>Enclosure</b>	Enclosure of ACM means the construction of solid enclosure (walls, ceiling, bulkhead etc.) around ACM, or  An Enclosure means the site isolation including hoarding walls, polyethylene sheeting and seals that isolates an Asbestos Work Area.
<b>Friable Material</b>	Material that: when dry, can be crumbled, pulverized or powdered by hand pressure, or is crumbled, pulverized or powdered. Includes previously non-friable asbestos-containing material that has become damaged to the extent that it may be crumbled, pulverized, or reduced to powder by hand pressure.
<b>Glove Bag Removal</b>	A method of removing friable insulation from a piping system using a prefabricated bag which isolates the section of insulation being removed.
<b>HEPA Filter</b>	High Efficiency Particulate Aerosol filter that is at least 99.97 percent efficient in collecting a 0.3 micrometre aerosol.
<b>HEPA Filtered Negative Pressure Unit:</b>	Portable air handling unit which extracts air directly from the Asbestos Work Area and discharges the air to the exterior of the building after passing through a HEPA filter.



<b>JOHSC</b>	Joint Occupational Health and Safety Committee.
<b>Phase Contrast Microscopy (PCM)</b>	A method which uses an optical microscope to determine airborne fibres, normally in an occupational setting. Results are presented as a number of fibres per cubic centimetre (f/cc). The method of analysis is based on the US National Institute for Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, issue 2, Asbestos and Other Fibres by PCM (August 15, 1994).
<b>Transmission Electron Microscopy (TEM)</b>	A method which uses an electron microscope to determine airborne asbestos fibres. Results are presented in fibres per cubic centimetre of air (f/cc). The method of analysis is The U.S. National Institute of Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7402, Issue 2: Asbestos by TEM (Aug 15, 1994).
<b>Low, Moderate and High Procedures</b>	Work classifications and procedures defined under provincial health and safety regulations.
<b>US EPA</b>	United States Environmental Protection Agency.

**APPENDIX A**

**Letter of Notification to Tenants Regarding Asbestos in Premises**



## **LETTER OF NOTIFICATION TO TENANTS REGARDING ASBESTOS IN PREMISES**

The following wording should be utilized in communicating the presence of asbestos to a tenant or lessee.

To Occupant

This letter is being provided as notification of the presence of asbestos within the building at [building name and/or address]. HRCE has recently had an asbestos assessment performed of the entire building and has established a program to manage all asbestos in a safe and prudent fashion.

Our Consultant inspected all areas of the building and made recommendations, where necessary, for removal or repair of asbestos. All such work [has been completed/will be completed shortly] with appropriate inspection and supervision. All asbestos remaining is subject to the Asbestos Management Program (AMP) as required by Provincial Regulations and our own due diligence. A copy of the assessment report and the AMP are available for review at the [Office].

The continuing presence of the remaining asbestos does not pose a risk of exposure to occupants as long as it remains under this management program. Staff have been given appropriate training and are aware of its presence.

If you have any concerns, please contact the AMP Facilitator at [phone number].



**APPENDIX B**  
**Contractor Notification and Acknowledgement Form**



## **CONTRACTOR NOTIFICATION AND ACKNOWLEDGEMENT FORM**

HRCE has identified the presence of various asbestos-containing materials (ACM) within [HRCE Facility name] located at [address]. An asbestos inventory report showing the locations and amounts of these materials is available for viewing from the AMP Facilitator.

The disturbance of ACM is to be undertaken by Asbestos Abatement Contractors that maintain the appropriate insurance coverage and meet the requirements set out in the Asbestos Management Program (AMP).

The following activities may disturb asbestos materials. The AMP Facilitator must be notified of the following:

- Any removal, repair or disturbance of any ACM.
- Ceiling entry which may disturb sprayed-fireproofing or pipe insulation, or debris on the ceiling.
- Any other operation which may generate airborne asbestos from friable asbestos.
- The disturbance of any material excluded from the Facility's asbestos assessment report.
- Discovery of any material excluded from the survey.

### **Declaration by Contractor**

The Contractor and their sub-contractors shall follow the work procedures as specified by HRCE's AMP and shall not disturb ACM without using proper procedures in accordance the provincial regulations and guidelines, and this AMP, including prior notification to the AMP Facilitator. All asbestos waste will be packaged, transported and disposed of in accordance with applicable regulations.

### **Notification of Asbestos Abatement**

All Contractors who perform work at facilities where ACM is present must be notified of the presence of the ACM if their work may bring them into contact, or close proximity to, the ACM. This notification may include janitorial, security, telephone, computer cabling suppliers, mechanical maintenance contractors, etc.

All contractors who perform work, including telephone, computer cabling suppliers, electrical and mechanical contractors, etc., at HRCE facilities, where asbestos-containing spray-applied insulation is present above ceilings are to be notified that Moderate Risk Procedures may be required for any entry to, or work within the ceiling space, determined by condition of material, scope of work, and potential for disturbance of the material.



Contractors are to:

- Notify municipal Landfill site as per provincial regulations.
- Inform all sub trades of the presence of ACM identified in the contract documents.
- If suspect ACM not identified in the contract documents are discovered during the course of the work, the Contractors are to stop all work which might disturb the suspect ACM. The contractor is to notify the Constructor (if applicable), HRCE and the JOHSC or OHS Representative for the workplace.

**By signing below, the Contractor acknowledges they have received, read and understand the requirements of HRCE's AMP.**

Building (Address): \_\_\_\_\_

Project: \_\_\_\_\_

Contractor: \_\_\_\_\_

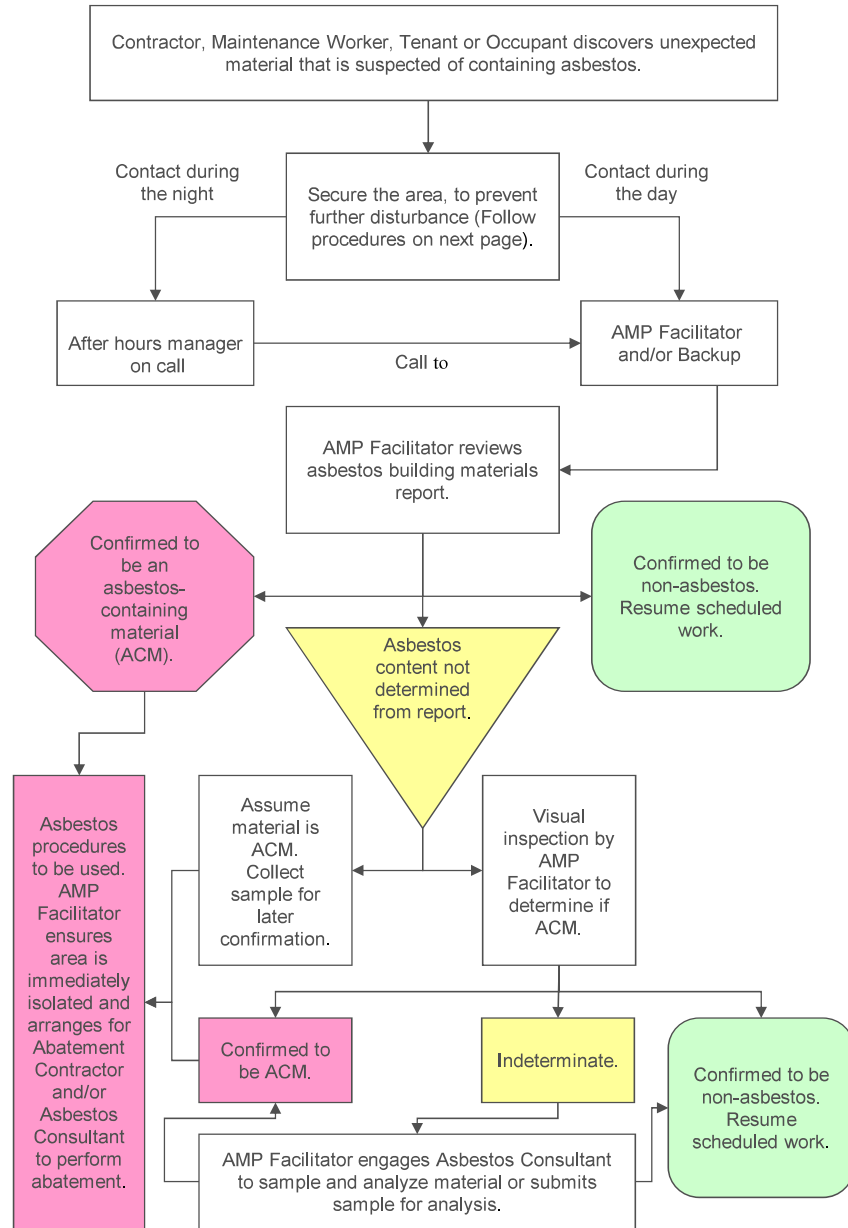
Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX C**  
**Response to Disturbance of Asbestos**

**EMERGENCY RESPONSES AND NOTIFICATION IN THE EVENT OF ASBESTOS-SUSPECT MATERIAL DISCOVERED DURING MAINTENANCE OR CONTRACTED WORK OR REPORTED BY OCCUPANT/TENANT**





## **EMERGENCY REACTION IN THE EVENT OF SUSPECTED ASBESTOS SPILL**

If asbestos-containing materials or suspect materials have been disturbed improperly, follow these directions:

- Do not clean up, cover, move or contact asbestos-containing or suspect material. Cease work in the area and do not resume work that risks disturbing the suspect material. Workers are to leave the area and the HRCE AMP Facilitator is to be notified immediately.
- Isolate the area by locking doors if this can be done without blocking emergency or fire routes.
- If it is not possible to safely isolate the area, the AMP Facilitator will notify appropriate persons not to enter the area. If possible, post security to prevent unnecessary access.
- The AMP Facilitator will arrange to shut down ventilation systems to the affected area including supply, return and exhaust.
- The AMP Facilitator will determine if asbestos is contained in the debris. If material cannot be confirmed asbestos-free by records or appearance, follow procedures below.
- The AMP Facilitator will contact an Asbestos Consultant to sample the material or identify the material visually.
- If the material is confirmed or assumed to contain asbestos, the AMP Facilitator is to contract an Asbestos Abatement Contractor to clean-up contaminated area.
- At their option, the AMP Facilitator may decide to employ an Asbestos Consultant to perform air monitoring and consulting, prior to, during, and/or after clean-up to determine airborne fibre concentrations prior to, and during, the work and to ensure airborne fibre levels are within acceptable limits to re-occupy the space. The AMP Facilitator must notify the Joint Occupational Health and Safety Committee of the results of air monitoring or testing.
- Enable ventilation systems after air monitoring or clean up of ACM.

**APPENDIX D**  
**Asbestos Project Work Record**



## ASBESTOS PROJECT WORK RECORD

Building: \_\_\_\_\_  
(Building Address or Name)

Date: \_\_\_\_\_  
(Today's Date)

Project Number: \_\_\_\_\_  
(HRCE Project Number or Purchase Order Number)

Project Type:

- Emergency       Planned Project  
 Low Risk       Moderate Risk       Glove Bag       High Risk

Area of Work: \_\_\_\_\_  
(Room Name, Number, Floor etc.)

Description: \_\_\_\_\_  
(Brief description of abatement, material, system, etc.)

Project Start Date: \_\_\_\_\_  
(Mobilization date)

Project End Date: \_\_\_\_\_  
(After dismantling/clean-up)

Contractor: \_\_\_\_\_  
(Contracting firm or employee)

Telephone: \_\_\_\_\_  
(Contractor or employee telephone)

Consultant: \_\_\_\_\_  
(Name of consulting firm/contact if any)

Telephone: \_\_\_\_\_  
(Consultant telephone)

Pre-Construction Assessment for asbestos-containing material (ACM) and other hazardous building materials (e.g. lead, mercury, silica, and PCBs) performed and report provided to Contractor?

Yes       No (Explain) \_\_\_\_\_

Air Sampling during abatement?

Yes       No





Clearance Air Monitoring performed after abatement?

Yes       No

Air Monitoring results to Joint Occupational Health and Safety Committee (if applicable)?

Yes       No

Asbestos Survey Updated to Reflect Changes in ACM Inventory?

Yes       No, no changes to ACM inventory resulted

No, to forward copies to Consultant prior to next re-assessment

Asbestos waste removed from site and disposed of?

Yes, ACM waste documentation attached       No, ACM waste not generated

No, ACM waste remains on site for later disposal

Append the following information relating to asbestos abatement to this work record, if applicable, and file Asbestos Work Record and attachments with Asbestos Management Program. Check where attached.

Submittals including Insurance       Yes       No

Waste Documentation       Yes       No

Specifications, Change Orders, Drawings       Yes       No

Consultant Inspection Reports       Yes       No

Air Monitoring Results       Yes       No

Analytical Certificates       Yes       No

Provincial Regulatory reports       Yes       No

Additional Correspondence       Yes       No

**APPENDIX E**  
**Reassessment of ACM**



**REASSESSMENT OF ACM**

Upon completion of Reassessment, fill out the following form in its entirety and file with this facility's Asbestos Management Program and Assessment Report.

Use of this form is not necessary if an Asbestos Consultant has produced a detailed Reassessment Report which identified the damaged ACM identified in the building during the Reassessment (along with the associated locations, quantities, accessibility, and any required abatement recommendations).

Building: \_\_\_\_\_

Dates of Reassessment: \_\_\_\_\_

Name of person completing reassessment: \_\_\_\_\_

Signature of surveyor: \_\_\_\_\_

Others present: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**Summary of Findings:**

(If no deterioration was noted, indicate here): \_\_\_\_\_.

(Specifically indicate only areas requiring action in the table below).

(Attached photographs to this form as required).

Room or Location	Material	Comments Regarding Condition: Disturbed/Undisturbed (if other, explain)	Action Required



**APPENDIX F**  
**Classifications of Abatement Work**

## **CLASSIFICATIONS OF ABATEMENT WORK**

Nova Scotia regulations/guidelines do not specifically classify asbestos work procedures, and only prescribe removal of friable materials including the use of Glove Bags.

In the absence of defined work classifications, the following are the generally accepting work classifications:

### **Low Risk**

- installation or removal of ACM ceiling tiles (less than 7.5 m<sup>2</sup>) without damage\*.
- installation or removal of non-friable ACM, other than ceiling tiles, without damage\*.
- damaging\* non-friable ACM that is wetted and where the work is done using non-powered hand-held tools.

### **Moderate Risk**

- removal of less than one square metre of drywall where ACM joint-filling compounds were used.
- enclosure of friable ACM.
- application of tape, a sealant or other covering to pipe or boiler insulation that is ACM.
- installing or removing ACM ceiling tiles that cover an area of 7.5 m<sup>2</sup> or more if the work is done without damaging the tiles.
- damaging non-friable ACM using non-powered hand-held tools if the material is not wetted.
- cleaning or removing filters used in air handling equipment in a building that has sprayed ACM insulation.
- glove bag removals of ACM insulation.
- Work that may expose a worker to asbestos and that is not classified as a Low Risk or High Risk operation, is also to be classified as a Moderate Risk operation.

### **High Risk**

- removal or disturbance of friable ACM.
- the removal of all or part of a false ceiling to access a work area, if ACM is likely to be lying on the surface of the false ceiling.
- spray application of a sealant to friable ACM.



- cleaning or removal of air-handling equipment, including rigid ducting but not including filters, in a building that has sprayed ACM insulation.
- repair, alteration or demolition of a kiln or furnace made, in part, of refractory materials that are ACM.
- Use of power tools not attached to dust-collecting devices with HEPA filters on non-friable ACM.

\* **damage** includes breakage, cutting, abrading, grounding, sanding, and vibration.

**APPENDIX G**  
**Site Specific Report(s)**

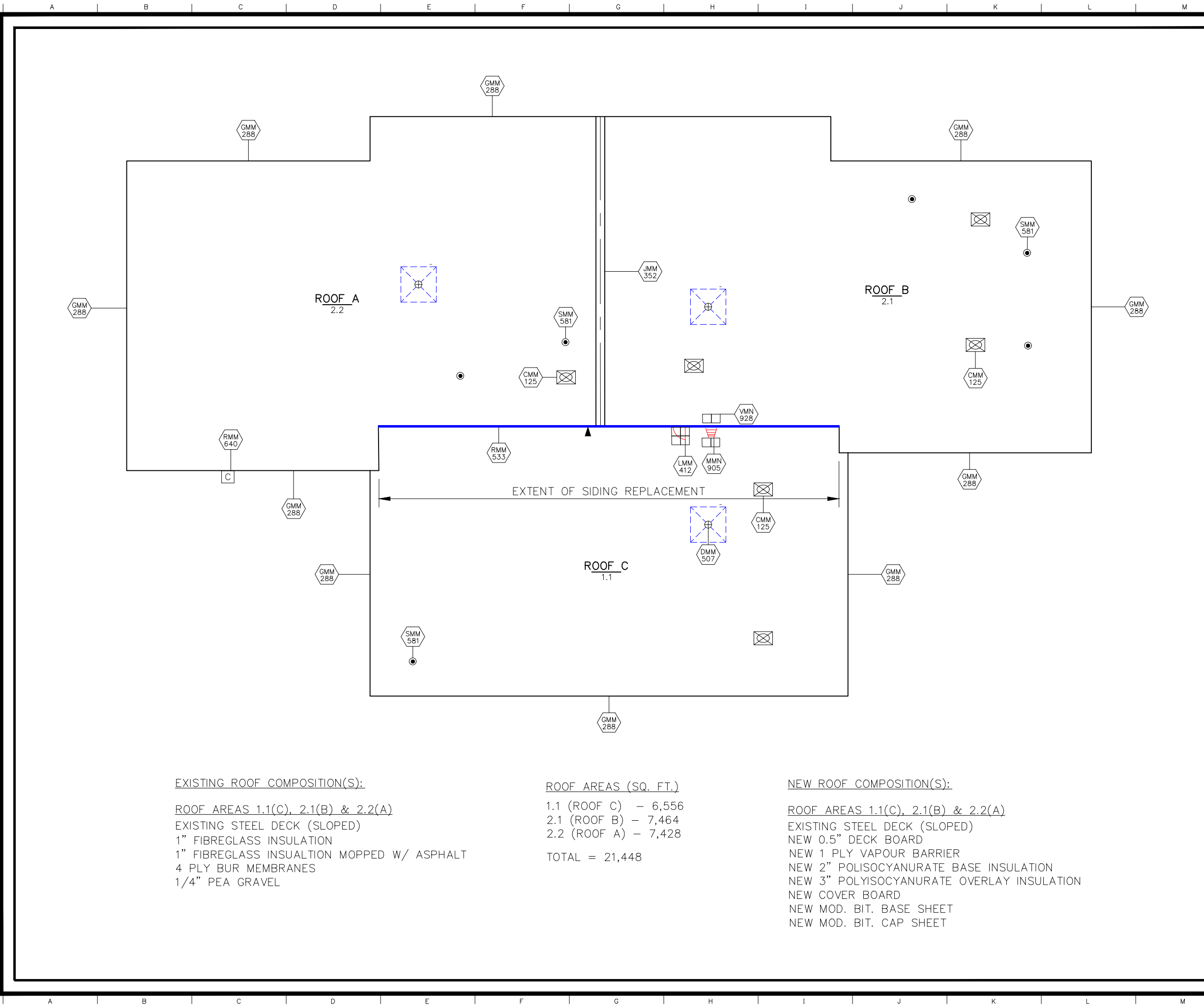




**Facility Specific Contacts**

<b>Contact Name</b>	<b>Title</b>	<b>Address</b>	<b>Phone Number</b>	<b>Email Address</b>

C:\USERS\VALEXAND\ONE DRIVE - RIMKUS CONSULTING GROUP, INC\DESKTOP\TEMP FOLDERS\ROCKINGSTONE HEIGHTS\ROCKINGSTONE HEIGHTS TEMP REVISED SPEC\_MAY 22, 2024\NB24-007SP\ROCKINGSTONE HEIGHTS ROOF PLAN.DWG



EXISTING ROOF COMPOSITION(S):

ROOF AREAS 1.1(C), 2.1(B) & 2.2(A)  
 EXISTING STEEL DECK (SLOPED)  
 1" FIBREGLASS INSULATION  
 1" FIBREGLASS INSUALTION MOPPED W/ ASPHALT  
 4 PLY BUR MEMBRANES  
 1/4" PEA GRAVEL

ROOF AREAS (SQ. FT.)

1.1 (ROOF C) - 6,556  
 2.1 (ROOF B) - 7,464  
 2.2 (ROOF A) - 7,428  
 TOTAL = 21,448

NEW ROOF COMPOSITION(S):

ROOF AREAS 1.1(C), 2.1(B) & 2.2(A)  
 EXISTING STEEL DECK (SLOPED)  
 NEW 0.5" DECK BOARD  
 NEW 1 PLY VAPOUR BARRIER  
 NEW 2" POLISOCYANURATE BASE INSULATION  
 NEW 3" POLYISOCYANURATE OVERLAY INSULATION  
 NEW COVER BOARD  
 NEW MOD. BIT. BASE SHEET  
 NEW MOD. BIT. CAP SHEET

**LEGEND**

- EXTENT OF SIDING REPLACEMENT
- NEW LADDER
- NEW DOOR

ROOF PROJECTIONS:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li> ANTENNA</li> <li> BREATHER</li> <li> CAPPED OFF/ABANDONED STACK</li> <li> CHANGE IN ELEV.</li> <li> CHIMNEY</li> <li> CONDUIT LINE</li> <li> CONTROL JOINT</li> <li> DRAIN</li> <li> EXHAUST FAN ON CURB</li> <li> EXPANSION JOINT</li> <li> EXPLOSION HATCH</li> <li> FLAGPOLE</li> <li> GAS PIPELINE</li> <li> GOOSENECK VENT</li> <li> GOOSENECK VENT ON OVERSIZED CURB</li> <li> HATCH</li> <li> HVAC UNIT</li> <li> HVAC UNIT ON CURB</li> </ul> | <ul style="list-style-type: none"> <li> HVAC UNIT ON SLEEPERS</li> <li> LADDER</li> <li> LIGHT POST</li> <li> PIPE SUPPORT</li> <li> PITCH POCKET</li> <li> PLUMBING OR SOIL STACK</li> <li> RA ROOF ANCHOR</li> <li> SATELLITE DISH</li> <li> SCUPPER</li> <li> SECURITY CAMERA</li> <li> SKYLIGHT</li> <li> SLOPE</li> <li> SQUARE VENT</li> <li> SQUARE VENT ON OVERSIZED CURB</li> <li> TALLCONE OR "B" VENT</li> <li> TALLCONE OR "B" VENT ON CURB</li> <li> UNUSED OPENING</li> <li> WALKWAY PADS</li> </ul> |
|---|--|

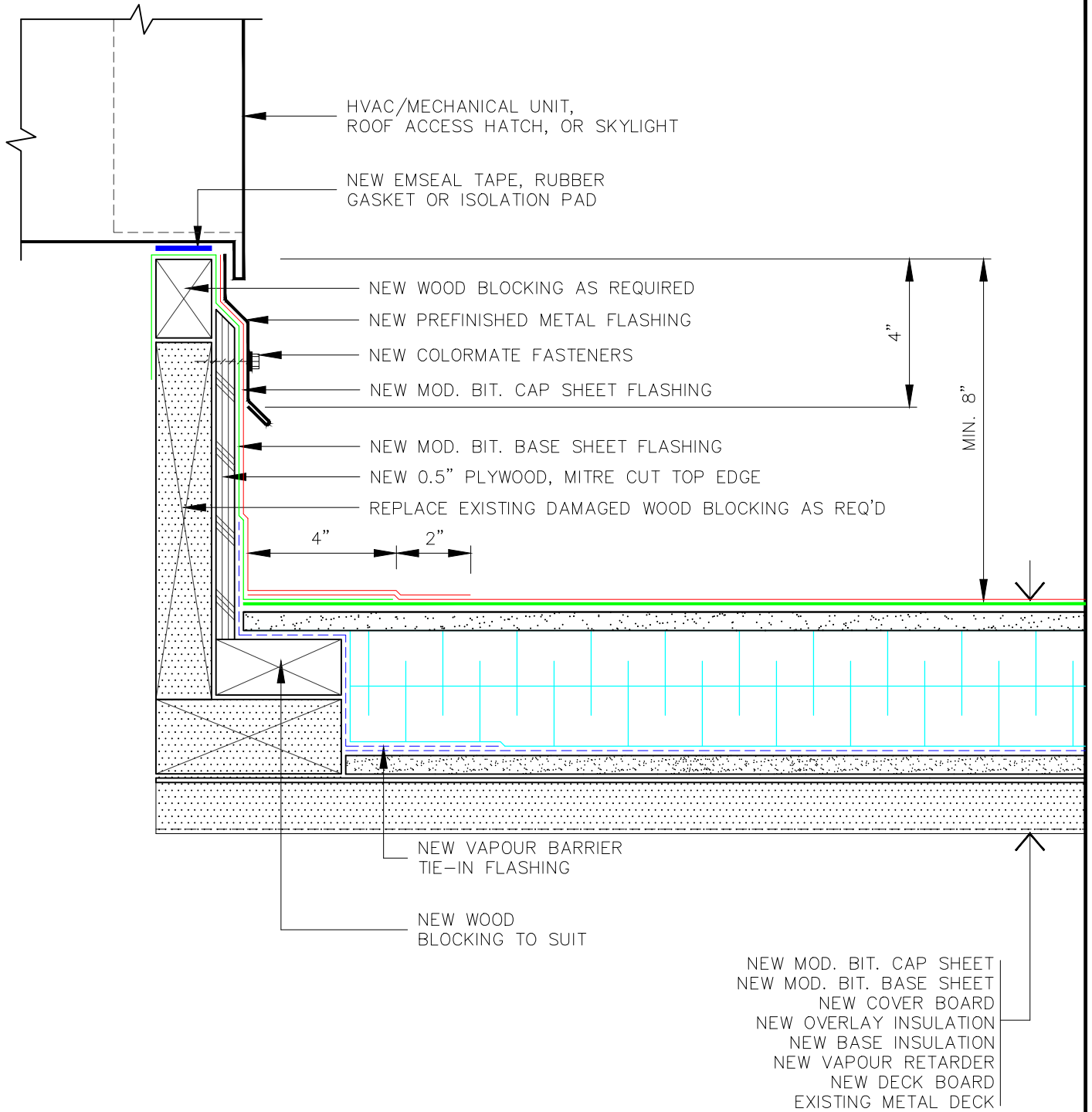
DRAINAGE:


- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li> TAPERED INSULATION LAYOUT</li> <li> DIRECTION OF WATER DRAINAGE</li> <li> 4.5" TOTAL INSUL. THICKNESS</li> </ul> | <ul style="list-style-type: none"> <li> NEW ROOF DRAIN TO BE INSTALLED</li> <li> INSULATION SUMP</li> <li> INSULATION CRICKET</li> </ul> |
|--|--|

NOTE: CONTRACTOR RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND MEASUREMENTS TO OWN SATISFACTION. © 2024 BY RIMKUS



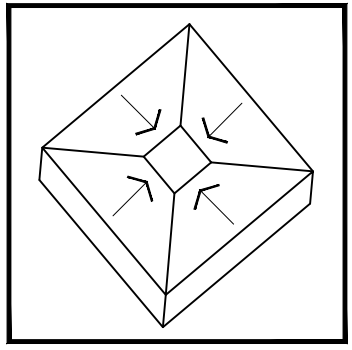
TITLE: ROOF PLAN	
CLIENT: HALIFAX CENTRE FOR EDU.	
PROJECT: ROCKINGSTONE HEIGHTS 1 REGAN DRIVE HALIFAX, NS	
IRC #: 26554	PROJECT NORTH:
W.O.#: NB24-007SP	 (TRUE NORTH)
SCALE: 3/64" = 1'-0"	
DATE: MAY 2024	DWG.#:
DRN. BY: J.S.	R1
CHK. BY: M.M/V.A.	



	TITLE:	CURB DETAIL		REVISED:	SCALE: 3" = 1'-0"
				REV'N.#:	DATE: MAY 2024
NOTE: NO REPRODUCTION OR USE OF THIS DRAWING IS AUTHORIZED WITHOUT EXPRESSED WRITTEN CONSENT © 2024 RIMKUS CONSULTING GROUP				DRN. BY: J.S.	DWG.#:
				CHK. BY: M.M./V.A.	CMM125

C:\Users\Alexand\OneDrive - Rinkus Consulting Group, Inc\Desktop\TEMP\_FOLDERS\Rockingstone Height TEMP Revised Spec\_May 22, 2024\DMM(1)29-RR-MD-ISO-DD-New.dwg

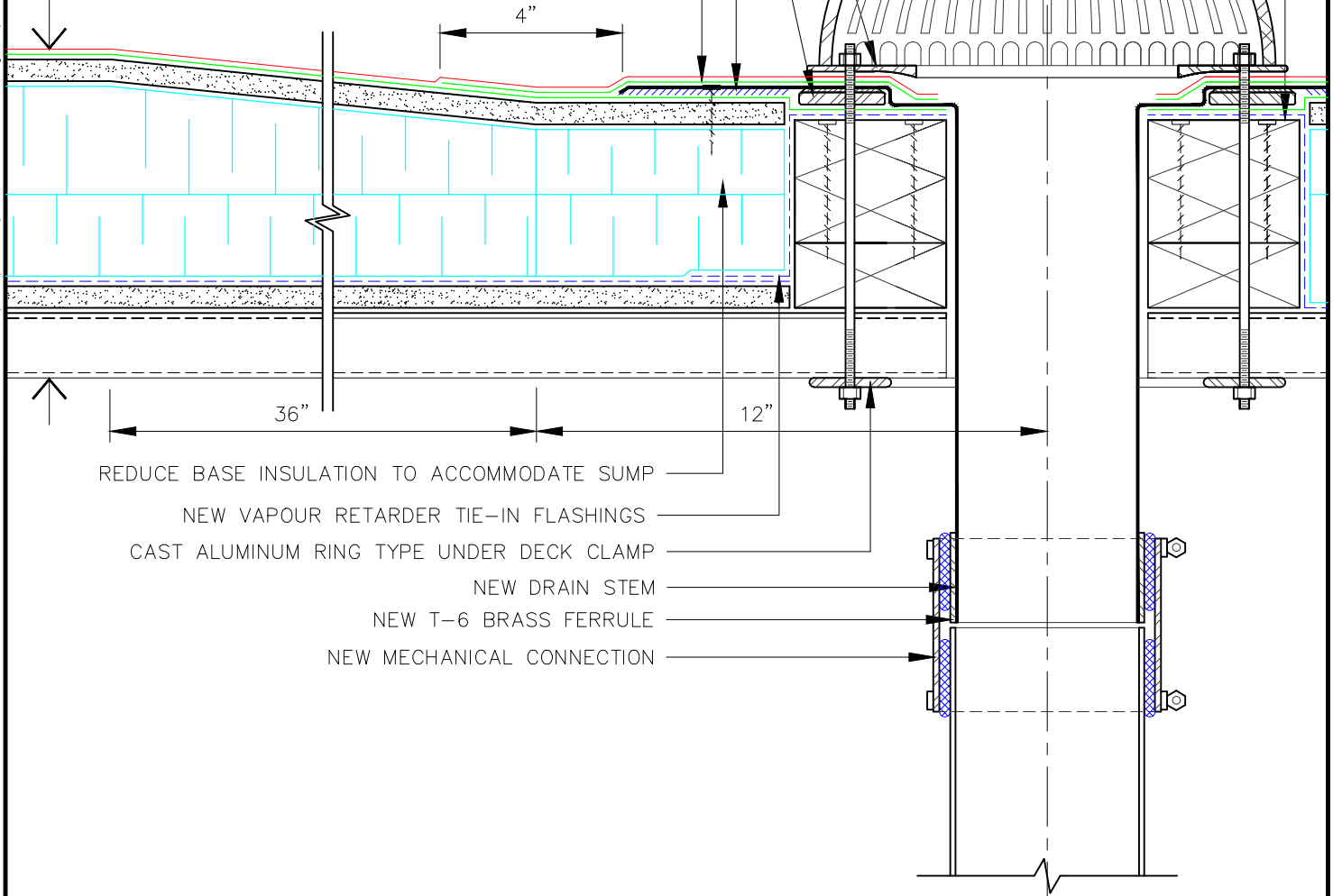
- NEW MOD. BIT. CAP SHEET
- NEW MOD. BIT. BASE SHEET
- NEW COVER BOARD
- NEW OVERLAY INSULATION
- NEW BASE INSULATION
- NEW VAPOUR RETARDER
- NEW DECK BOARD
- EXISTING METAL DECK



SUMP DIAGRAM

- CAST ALUMINUM DOME WITH HINGED ACCESS GATE
- STAINLESS STEEL VANDAL PROOF RETAINING SCREW
- NEW THALER "RD-4C-FLAT" DRAIN
- CAST ALUMINUM CLAMPING RING
- BRONZE STABILIZER RING WITH WELDED STAINLESS STEEL BOLTS
- SET PRIMED DRAIN FLANGE IN LAYER OF SEALANT
- NEW MOD. BIT. BASE SHEET SHEET FLASHING

NEW WOOD BLOCKING TO SUIT



- REDUCE BASE INSULATION TO ACCOMMODATE SUMP
- NEW VAPOUR RETARDER TIE-IN FLASHINGS
- CAST ALUMINUM RING TYPE UNDER DECK CLAMP
- NEW DRAIN STEM
- NEW T-6 BRASS FERRULE
- NEW MECHANICAL CONNECTION



TITLE: **NEW DRAIN DETAIL**

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REVISED:

REV'N.#:

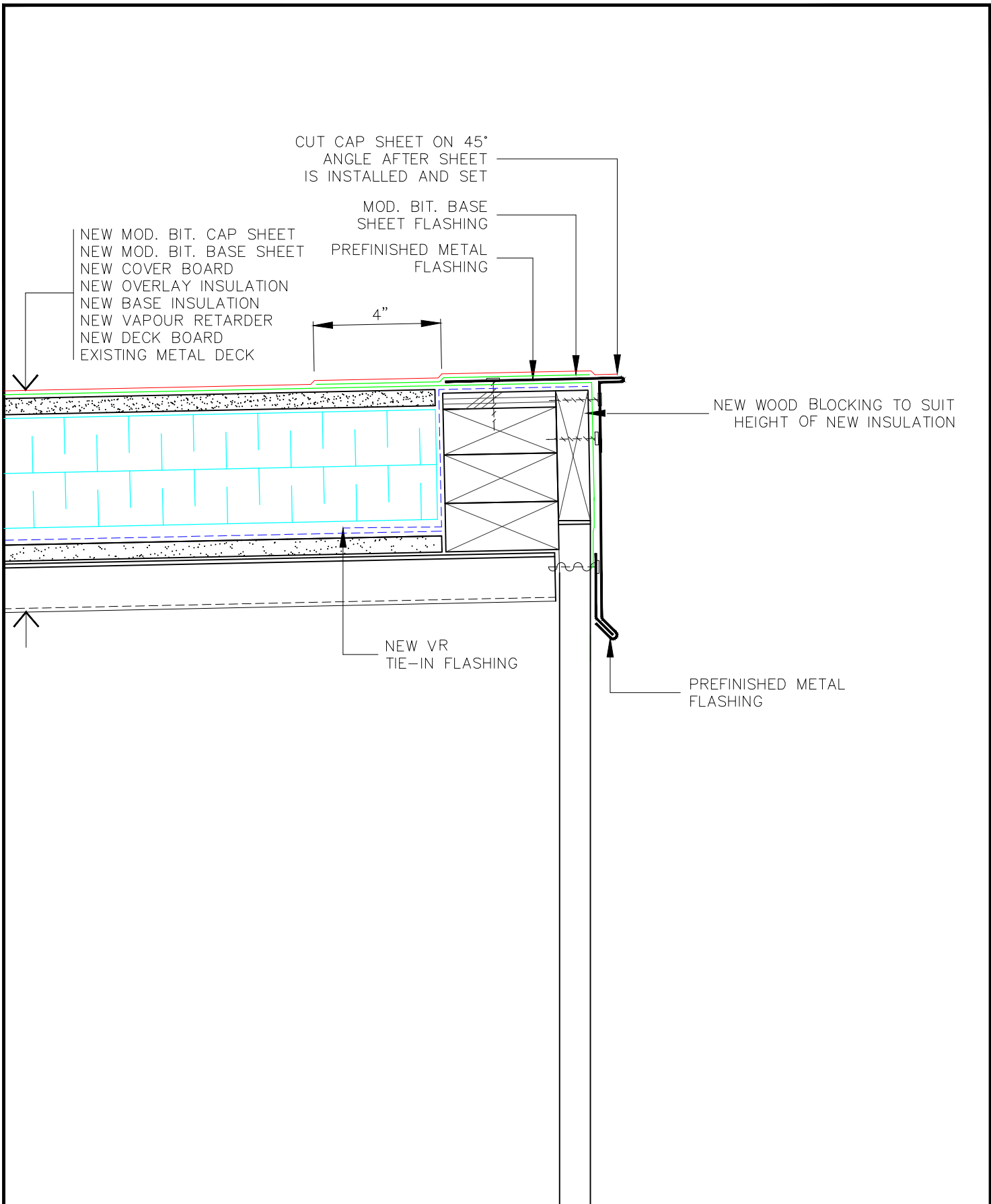
DRN. BY: **F.R.A.**

CHK. BY: **M.H./J.C.**

SCALE: **3" = 1'-0"**

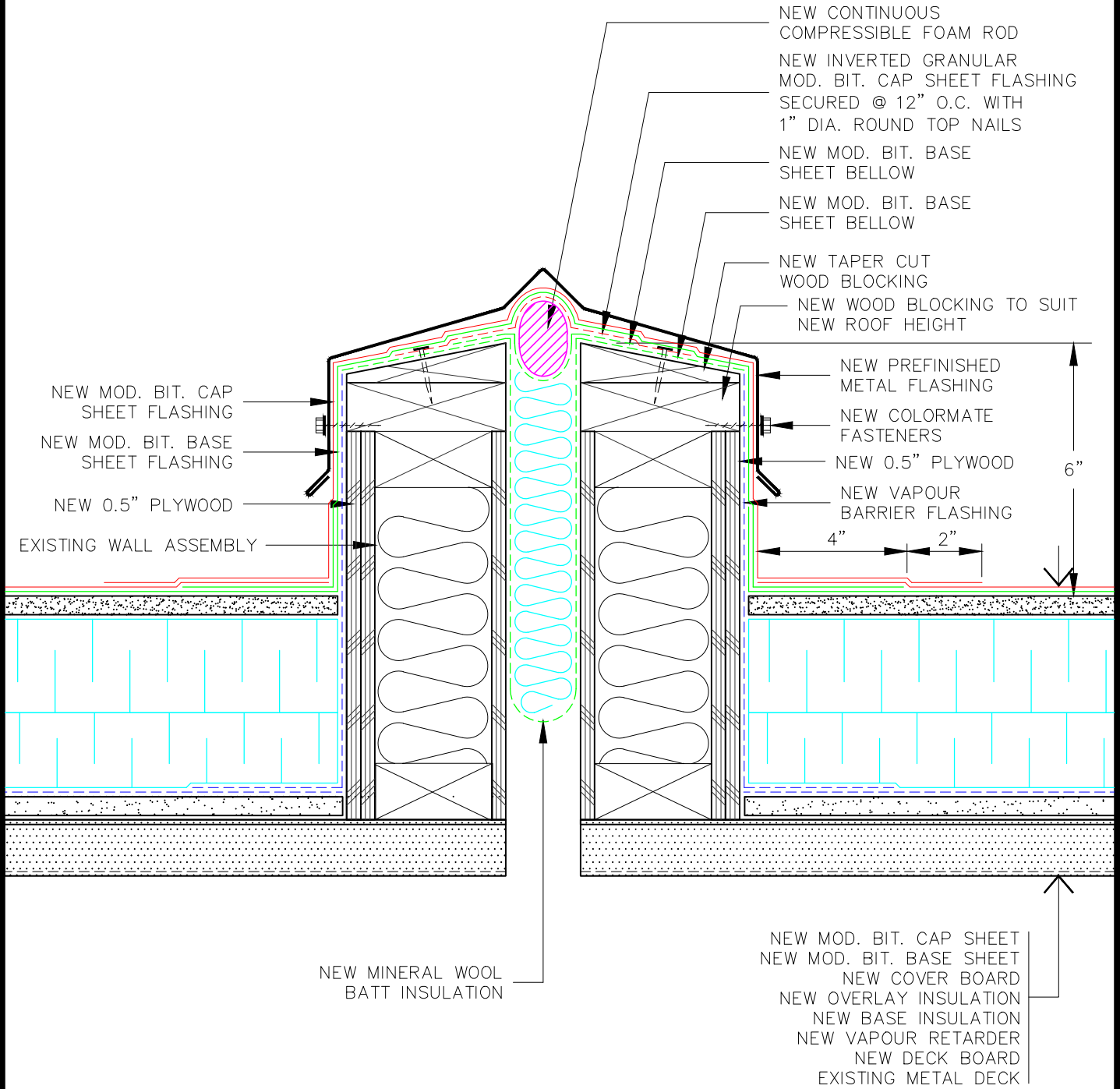
DATE: **MAY 2024**

DWG.#: **DMM129**



	<b>TITLE:</b> EAVE DETAIL AT NEW MOD. BIT. ROOF	<b>REVISED:</b>	<b>SCALE:</b> 3" = 1'-0"
	<b>NOTE:</b> NO REPRODUCTION OR USE OF THIS DRAWING IS AUTHORIZED WITHOUT EXPRESSED WRITTEN CONSENT © 2024 RIMKUS CONSULTING GROUP	<b>REV'N.#:</b>	<b>DATE:</b> MAY 2024
		<b>DRN. BY:</b> J.S.	<b>DWG.#:</b> GMM288
		<b>CHK. BY:</b> M.M./V.A.	

C:\USERS\VALEXANDER\DRIVE - RIMKUS CONSULTING GROUP - INC\DESKTOP\TEMP FOLDERS\ROCKINGSTONE HEIGHTS TEMP\REVISED SPEC\_MAY 22, 2024\JMM352-RR-MD-ISO-ISODD\_NEW2\NEW.DWG



**RIMKUS**

69 Maple Ave,  
New Glasgow, NS B2H2B3  
EXPERT@RIMKUS.COM  
(800) 580-3228 | (709) 699-2617

CERTIFICATE OF AUTHORIZATION: N/A

SEAL:

PROJECT: ROCKINGSTONE HEIGHTS HIGH SCHOOL  
ROOF REPLACEMENT

CLIENT: HALIFAX REGIONAL CENTRE FOR EDUCARION

SHEET TITLE: EXPANSION JOINT DETAIL

FOR CLIENT'S SOLE USE PER GOVERNING CONTRACT AND LIMITED TO APPLICABLE PROJECT. NO MODIFICATIONS OR REPRODUCTIONS WITHOUT WRITTEN APPROVAL OF RIMKUS. CONTRACTOR SOLELY RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.

NO.	ISSUED FOR:	DATE (Y-M-D):
1.		
2.		
3.		
4.		
5.		
6.		

PROJECT NO.:

DESIGNED BY:

DRAWN BY: J.S.

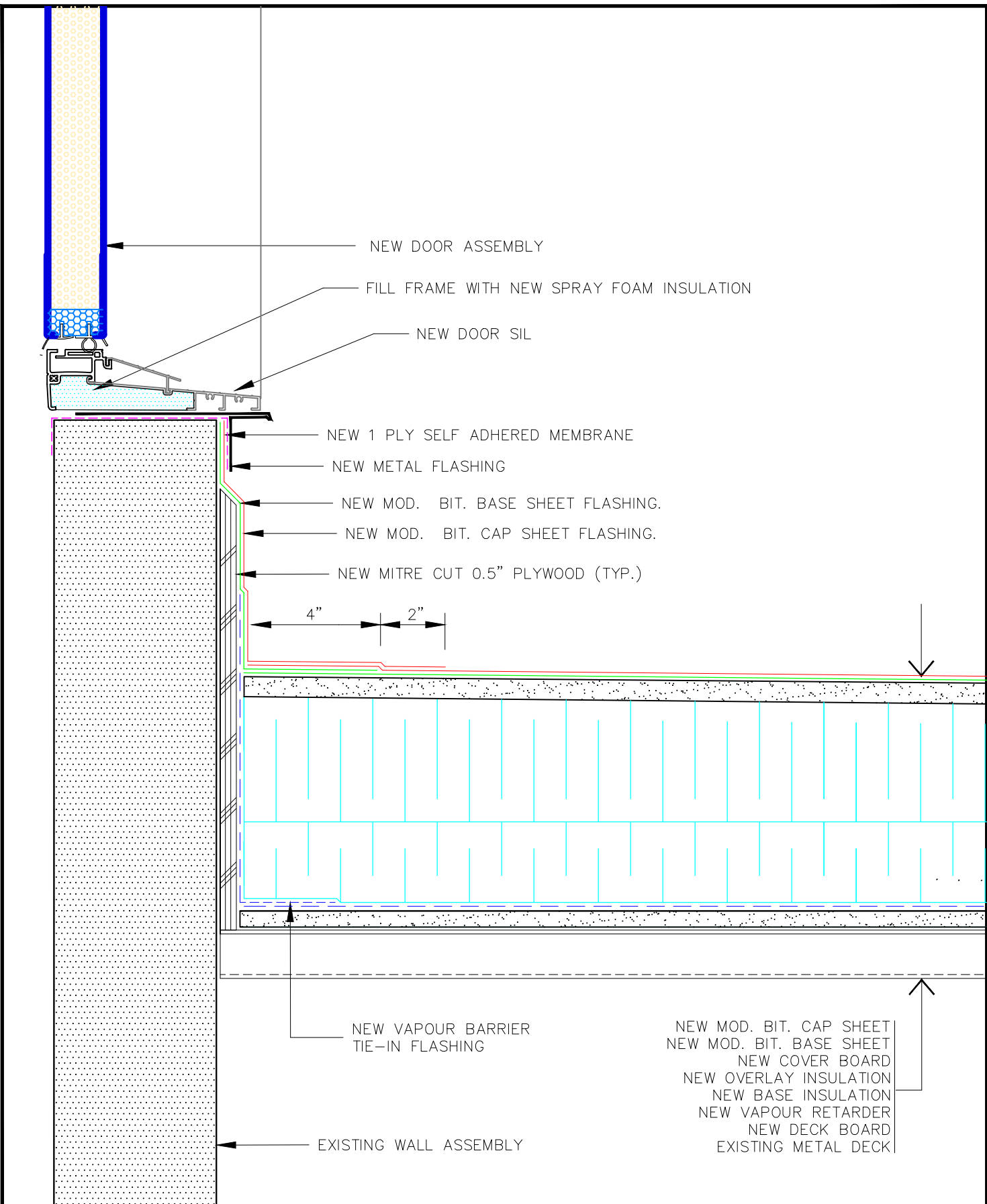
CHECKED BY: M.M./V.A.

SCALE: 3" = 1'-0"

DATE (Y-M-D): 2024-05-22

DRAWING NO.: **JMM352**

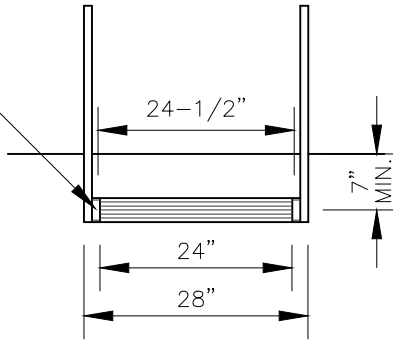
SHEET NO.: OF



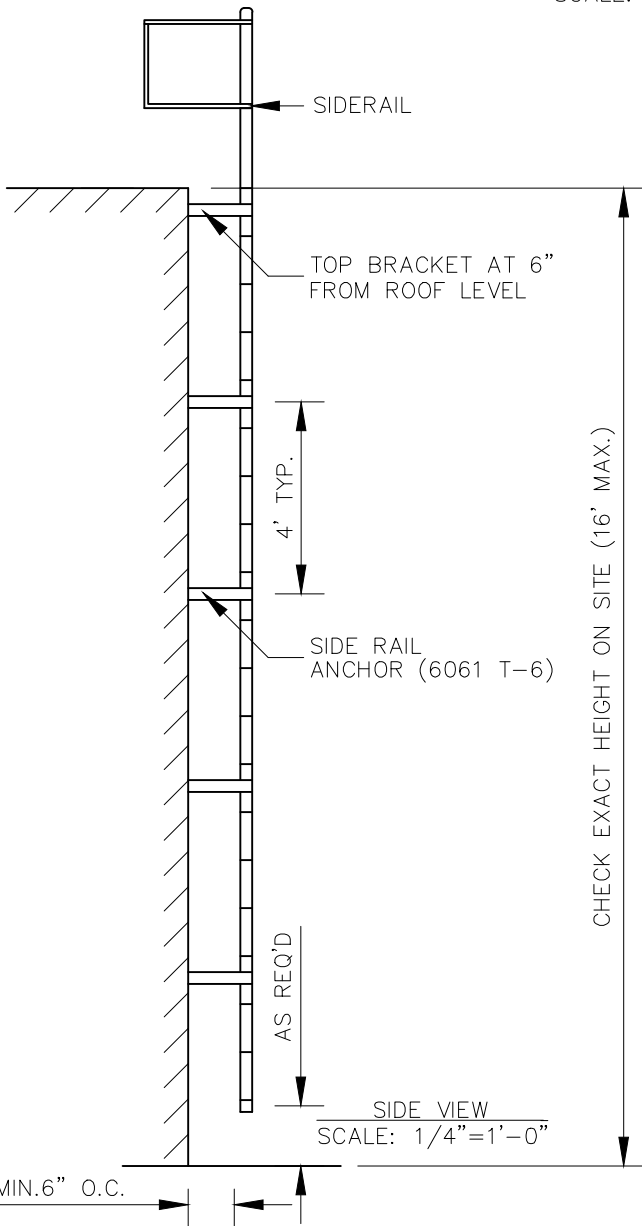
	TITLE:	DOOR SILL DETAIL		REVISED:		SCALE:	3" = 1'-0"
				REV'N.#:		DATE:	MAY 2024
	NOTE:	NO REPRODUCTION OR USE OF THIS DRAWING IS AUTHORIZED WITHOUT EXPRESSED WRITTEN CONSENT		DRN. BY:	J.S.	DWG.#:	LMM412
		© 2024 RIMKUS CONSULTING GROUP		CHK. BY:	M.M./V.A.		

NOTE:  
 DIMENSIONS AS RECOMMENDED  
 BY LADDER MANUFACTURER  
 TO MEET BUILDING AND  
 LIFE SAFETY CODE. SUBMIT  
 SHOP DRAWINGS FOR REVIEW.

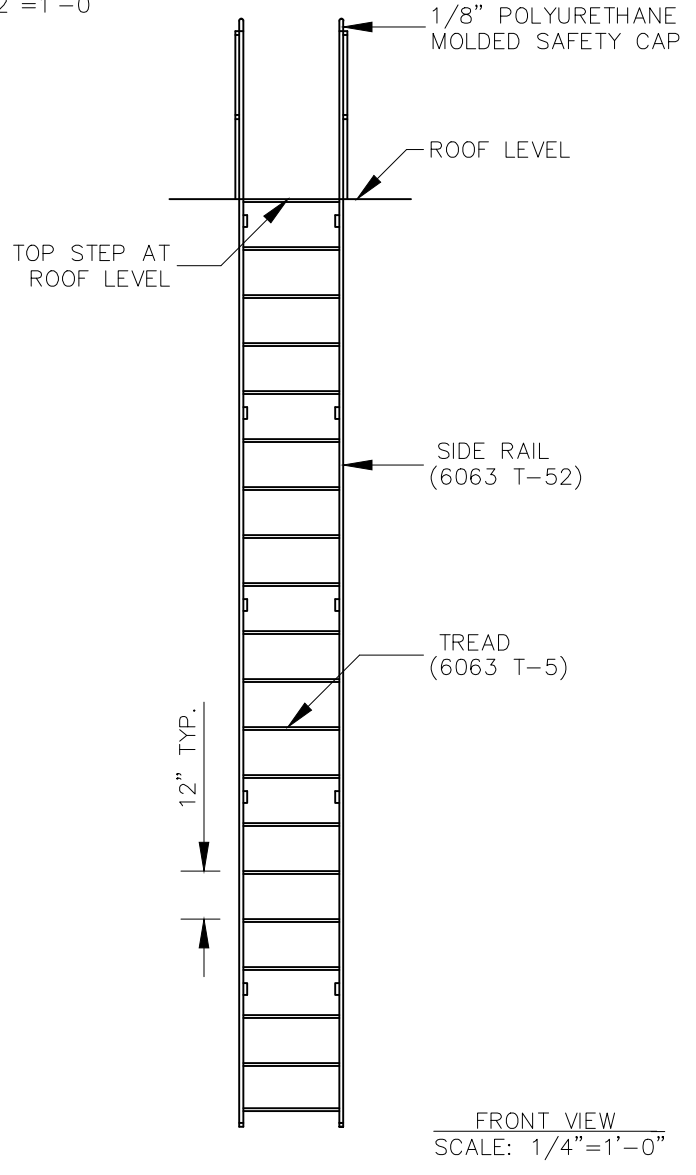
TREAD MATERIAL  
 WELDED TO INSIDE  
 OF WALK-THROUGH  
 FOR SUPPORT



PLAN VIEW  
 SCALE: 1/2"=1'-0"



SIDE VIEW  
 SCALE: 1/4"=1'-0"



FRONT VIEW  
 SCALE: 1/4"=1'-0"



TITLE: LADDER DETAIL

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REVISED:  
 REV'N.#:  
 DRN. BY: J.S.  
 CHK. BY: M.M./V.A.

SCALE: AS NOTED  
 DATE: MAY 2024  
 DWG.#: MNN905



\* NOT ALL COMPONENTS OR LAYERS ARE SHOWN FOR CLARITY

INSTALL NEW Z-GIRTS AS RECOMMENDED BY MANUFACTURER

REMOVE EXISTING METAL SIDING AND INSTALL NEW SIDING AS SHOWN ON ROOF PLAN R1.AT AT ALL REMAINING AREAS, REMOVE, STORE, AND REINSTATE SIDING PANELS TO PERFORM DETAIL WORK AS REQUIRED.

POSITIVELY LAP EXISTING WALL MEMBRANE AS SHOWN. IF MEMBRANE CANNOT BE ADJUSTED, INSTALL NEW SELF-ADHERED WALL MEMBRANE OVER ROOF MEMBRANES

NEW CONTINUOUS SEALANT

NEW METAL TRIM AS REQUIRED

NEW COLORMATE FASTENERS (TYP.)

NEW PREFINISHED METAL DRIP FLASHING

NEW MOD. BIT. CAP SHEET FLASHING

NEW MOD. BIT. BASE SHEET FLASHING

NEW 0.5" PLYWOOD SHEATHING

4" 2"

MIN. 8"

MIN. 12"

NEW VAPOUR BARRIER TIE-IN FLASHING

NEW MOD. BIT. CAP SHEET  
 NEW MOD. BIT. BASE SHEET  
 NEW COVER BOARD  
 NEW OVERLAY INSULATION  
 NEW BASE INSULATION  
 NEW VAPOUR RETARDER  
 NEW DECK BOARD  
 EXISTING METAL DECK

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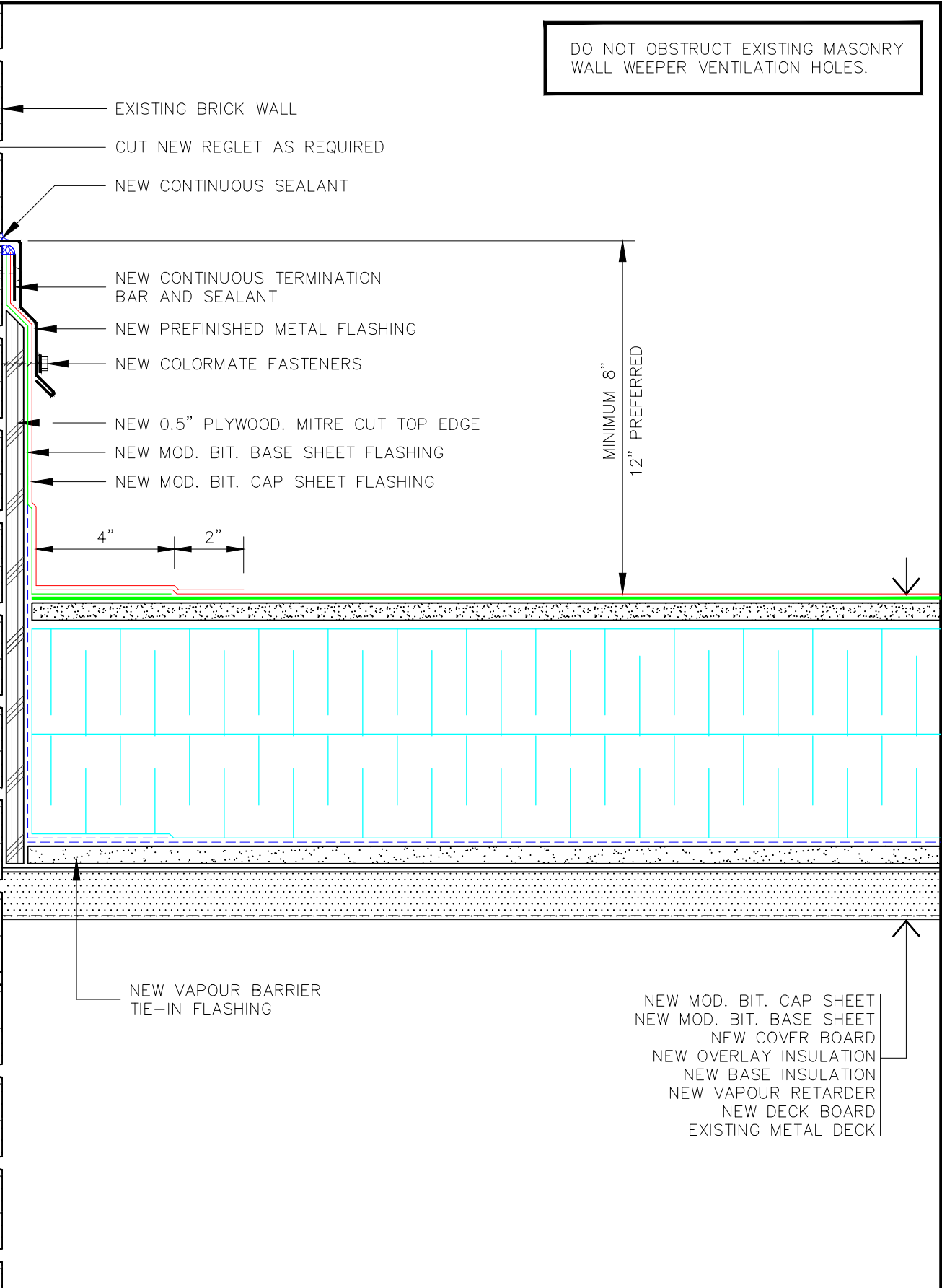
TITLE:	<b>WALL FLASHING DETAIL</b>
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REVISED:	
REV'N.#:	
DRN. BY:	J.S.
CHK. BY:	M.M./V.A.

SCALE:	3" = 1'-0"
DATE:	MAY 2024
DWG.#:	RMM533

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DO NOT OBSTRUCT EXISTING MASONRY WALL WEEPER VENTILATION HOLES.



EXISTING BRICK WALL

CUT NEW REGLET AS REQUIRED

NEW CONTINUOUS SEALANT

NEW CONTINUOUS TERMINATION BAR AND SEALANT

NEW PREFINISHED METAL FLASHING

NEW COLORMATE FASTENERS

NEW 0.5" PLYWOOD. MITRE CUT TOP EDGE

NEW MOD. BIT. BASE SHEET FLASHING

NEW MOD. BIT. CAP SHEET FLASHING

MINIMUM 8"  
12" PREFERRED

4" 2"

NEW VAPOUR BARRIER TIE-IN FLASHING

NEW MOD. BIT. CAP SHEET  
NEW MOD. BIT. BASE SHEET  
NEW COVER BOARD  
NEW OVERLAY INSULATION  
NEW BASE INSULATION  
NEW VAPOUR RETARDER  
NEW DECK BOARD  
EXISTING METAL DECK



TITLE: REGLET FLASHING DETAIL

REVISED:  
REV'N.#:

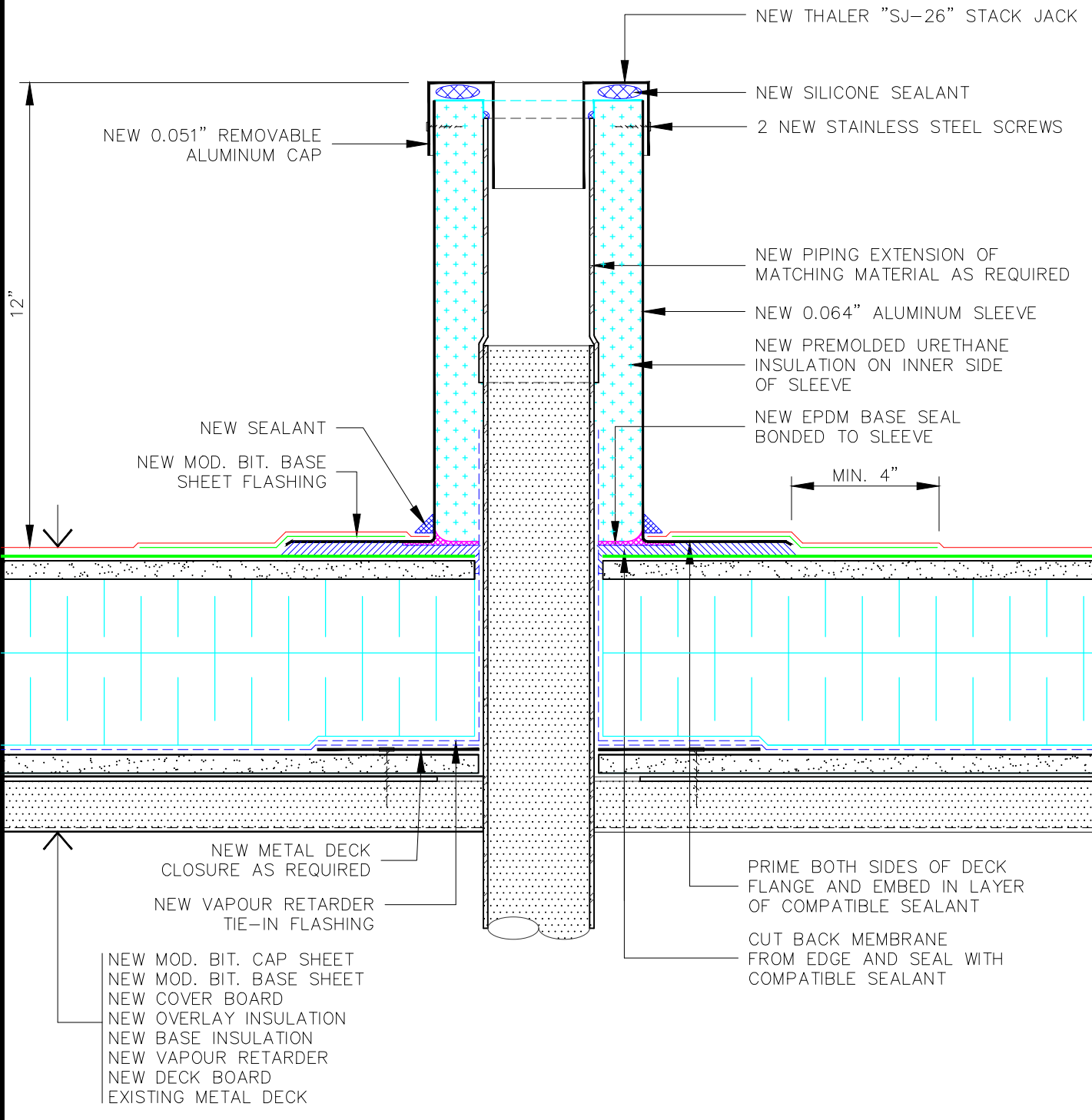
SCALE: 3" = 1'-0"  
DATE: MAY 2024

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DRN. BY: J.S.  
CHK. BY: M.M./V.A.

DWG.#: RMM640

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**RIMKUS**  
 69 Maple Ave,  
 New Glasgow, NS B2H2B3  
 EXPERT@RIMKUS.COM  
 (800) 580-3228 | (709) 699-2617  
 CERTIFICATE OF AUTHORIZATION: N/A

NO.	ISSUED FOR:	DATE (Y-M-D):
1.		
2.		
3.		
4.		
5.		
6.		

SEAL:

PROJECT: ROCKINGSTONE HEIGHTS HIGH SCHOOL  
 240 LEIGHLAND AVENUE, OAKVILLE

CLIENT: HALIFAX REGIONAL CENTRE FOR EDUCATION

SHEET TITLE: PLUMBING STACK FLASHING DETAIL

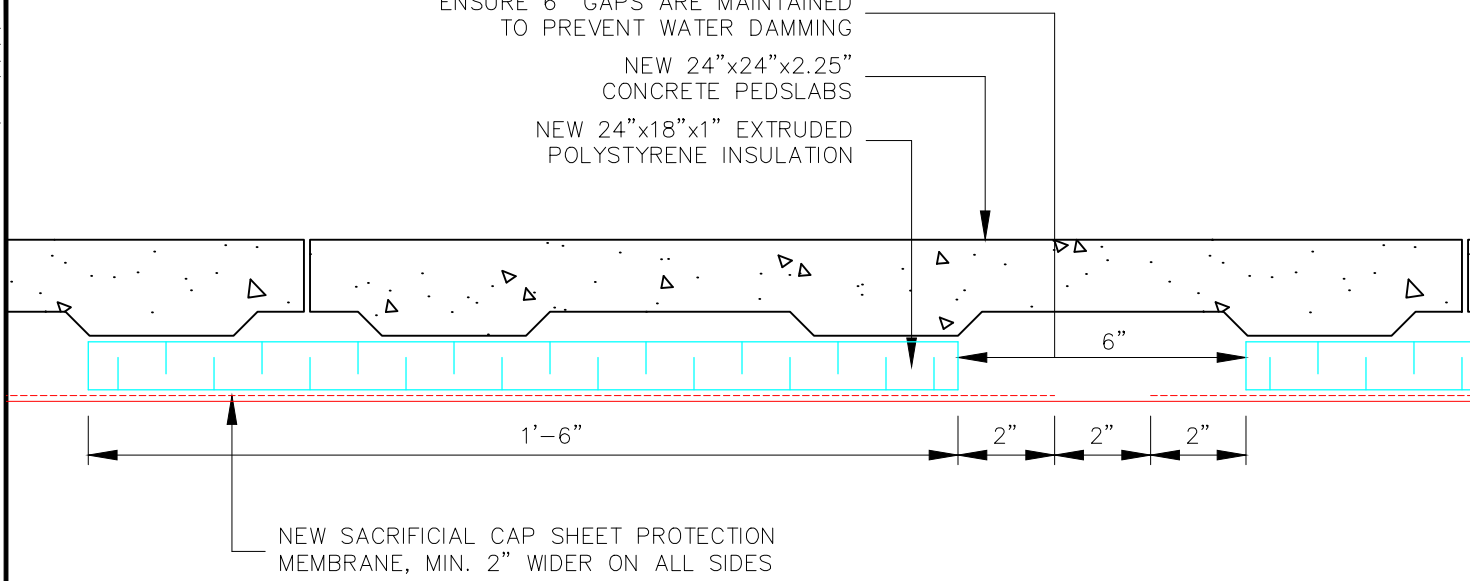
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PROJECT NO.: 100246102	DATE (Y-M-D): 2024-05-22
DESIGNED BY:	DRAWING NO.: <b>SMM581</b>
DRAWN BY: J.S.	SHEET NO.: OF
CHECKED BY: M.M./V.A.	
SCALE: 3" = 1'-0"	

ENSURE 6" GAPS ARE MAINTAINED  
TO PREVENT WATER DAMMING

NEW 24"x24"x2.25"  
CONCRETE PEDSLABS

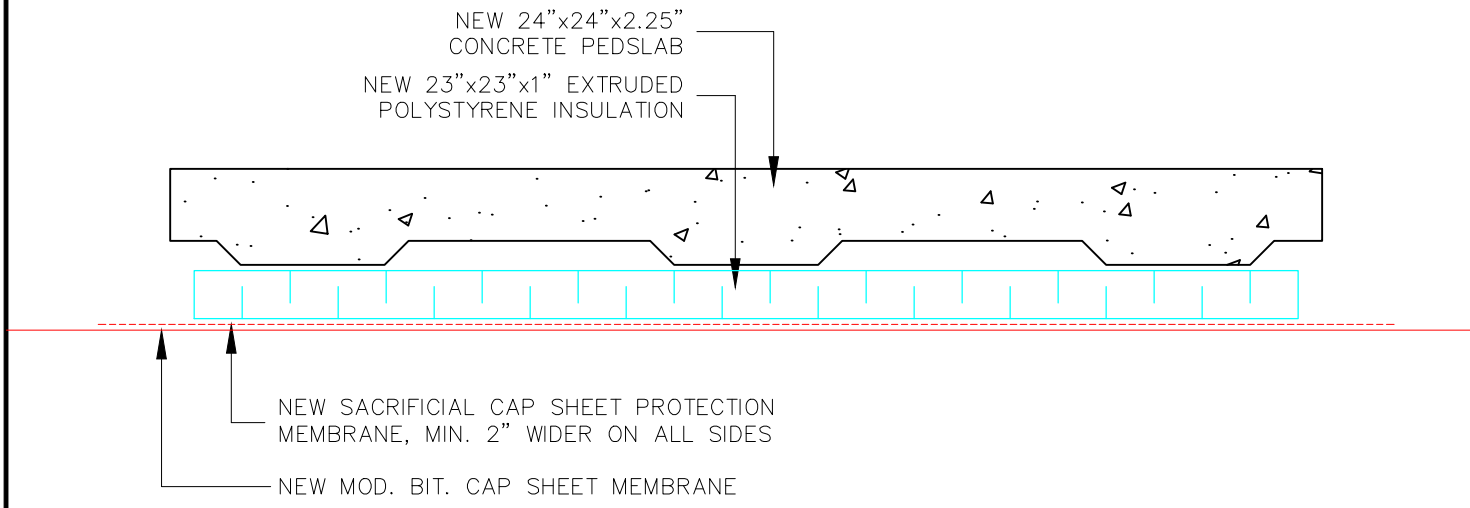
NEW 24"x18"x1" EXTRUDED  
POLYSTYRENE INSULATION



PAVER WALKWAY

NEW 24"x24"x2.25"  
CONCRETE PEDSLAB

NEW 23"x23"x1" EXTRUDED  
POLYSTYRENE INSULATION



SINGLE PAVER



TITLE:	WALKWAY/PAVER DETAIL	REVISED:	SCALE: 3" = 1'-0"
		REV'N.#:	DATE: MAY 2024
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		CHK. BY: A.J.D./T.K.C.	



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