



• JEFFERY ARCHITECT •

SIMCOE COUNTY DISTRICT SCHOOL
BOARD



Simcoe County
District School Board

1170 The King's Highway 26
Midhurst, Ontario L0L 1X0
Phone: (705)728-7570

**INNISFIL CENTRAL PUBLIC
SCHOOL**

ACCESSIBILITY RENOVATIONS

SPECIFICATIONS

PROJECT NO. 11251T

FEB 19, 2018

22 BLAKES
STREET,
BARRIE
L4M 1J6

Tel. 705 739-1757
Fax 705 739-6798

ISSUED FOR TENDER FEBRUARY 20, 2018

**SPECIFICATION
for**

**INNISFIL CENTRAL PUBLIC SCHOOL
ACCESSIBILITY RENOVATIONS
PROJECT NO. 11251T**

OWNER

Simcoe County District School Board
1170 Hwy. 26
Midhurst, ON L9X 1N6
Attention: David Kreuter

FEB 19, 2018

<u>TITLE</u>	<u>PAGES</u>
<u>DIVISION 00:</u>	
00001 LIST OF CONTENTS	2
00002 LIST OF DRAWINGS	1
00100 INSTRUCTIONS TO BIDDERS	19
00200 LIST OF CONSULTANTS	1
00810 SUPPLEMENTARY CONDITIONS TO THE CONTRACT CCDC 2 - 2008	28
<u>DIVISION 01:</u>	
01000 GENERAL INSTRUCTIONS	4
01020 CASH ALLOWANCES	1
01060 REGULATORY REQUIREMENTS	1
01200 PROJECT ADMINISTRATION	3
01340 SHOP DRAWINGS	2
01400 QUALITY CONTROL	2
01500 TEMPORARY FACILITIES	5
01600 PRODUCTS AND WORKMANSHIP	2
01700 CONTRACT CLOSEOUT & FINAL CLEANING	4
01710 EXTENDED WARRANTIES AND GUARANTEES	1
<u>DIVISION 02:</u>	
02070 DEMOLITION & REMOVAL	3
02500 ASPHALT PAVING	4
<u>DIVISION 05:</u>	
05500 MISCELLANEOUS METALS	3
<u>DIVISION 7:</u>	
07270 FIRESTOPPING	3
07900 SEALANTS	4
<u>DIVISION 8:</u>	
08710 FINISH HARDWARE	5
<u>DIVISION 9:</u>	
09000 ROOM FINISH SCHEDULE	2
ROOM FINISH SCHEDULE – ON DRAWINGS	
09250 GYPSUM BOARD	4
09410 PORTLAND CEMENT TERRAZZO	3
09510 ACOUSTIC TILE CEILINGS	4
09900 PAINTING	11
09920 INTERIOR RE-PAINTING	9
<u>DIVISION 10:</u>	
10170 TOILET PARTITIONS	3
10800 WASHROOM ACCESSORIES	2
<u>MECHANICAL:</u>	
SEE MECHANICAL DRAWINGS	
<u>ELECTRICAL:</u>	
SEE ELECTRICAL DRAWINGS	

END OF LIST OF CONTENTS

ARCHITECTURAL:

A1 PLANS AND DETAILS


MECHANICAL:

M100 MECHANICAL LEGEND, SCHEDULES, DETAILS AND DRAWING LIST
M200 MECHANICAL PART PLANS
M300 MECHANICAL SPECIFICATIONS

ELECTRICAL:

E1 DRAWING LIST LEGEND AND KEY PLAN
E2 ELECTRICAL SPECIFICATIONS
E3 ELECTRICAL PLANS AND DETAILS
E4 ELECTRICAL DETAILS

END OF LIST OF DRAWINGS

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

1. INTRODUCTION

1.1 INVITATION


- 1.1.1 Simcoe County District School Board (the “**Owner**”) is soliciting Bids from prequalified general contractors to perform the work described in the Bid Documents (the “**Work**”) at ***Innisfil Central Public School*** located at ***2075 5th Line, Lefroy, Ontario.*** (the “**Place of the Work**”).

1.2 KEY INFORMATION

- 1.2.1 This Section provides a summary of some key information contained in the Bid Documents and is provided solely as a convenience. Bidders are urged to read all of the Bid Documents carefully and thoroughly to ensure they fully understand all of the terms and conditions, including all Contract requirements.
- (a) The Owner has scheduled a mandatory site meeting at ***Innisfil Central Public School*** on ***Wednesday, February 28, 2018***, commencing at ***10:00 AM***.
 - (b) The Owner requires that all Bidders attend the mandatory site meeting.
 - (c) The deadline for submitting questions (the “**Question Deadline**”) is 10 days before the Submission Deadline.
 - (d) Bids must be submitted online through the Portal BEFORE 1:30:00PM Local Time on ***Tuesday, March 13, 2018*** (the “**Submission Deadline**”).
 - (e) Bids must be irrevocable for a period of ninety (90) days starting from the day after the Submission Deadline (the “**Irrevocability Period**”).
 - (f) The form of bid security to be delivered as part of the Bid shall be a **digital bid bond**.
 - (g) The successful Bidder is permitted to commence work on site as of ***Monday, July 2, 2018***.
 - (h) The successful Bidder will be required to achieve Substantial Performance of the Work by ***Friday, August 24, 2018***.
 - (i) The Bid Coordinator is Justin Apokremiotis, Purchasing Supervisor, at “japokremiotis@scdsb.on.ca”.

1.3 PREQUALIFICATION


- 1.3.1 The following general contractors are prequalified to submit a Bid (each a “**Prequalified Contractor**”):
- (a) [Anacond Contracting Inc.](#);
 - (b) [Aquicon Construction](#);
 - (c) [B.W.K. Construction Company Ltd.](#);
 - (d) [Bertram Construction \(Ontario\) Ltd](#);
 - (e) [Brown Daniels Associates Inc.](#);
 - (f) [Dawson Contracting \(Barrie\) Ltd.](#);
 - (g) [Deciantis Construction Ltd.](#);

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (h) [Devlan Construction Ltd.;](#)
- (i) [Everstrong Construction Ltd.;](#)
- (j) [Gateman-Milloy Inc.;](#)
- (k) [Greystone Project Management Inc.;](#)
- (l) [JR Certus Construction Co. Ltd.;](#)
- (m) [Les Bertram & Sons \(1985\) Ltd.;](#)
- (n) [Lisgar Construction Company;](#)
- (o) [M.J. Dixon Construction Ltd.;](#)
- (p) [Percon Construction Ltd.;](#)
- (q) [Pre-Eng Contracting Ltd.;](#)
- (r) [Quad Pro Construction Inc.;](#)
- (s) [Quinan Construction Ltd.;](#)
- (t) [R.J.B. Construction \(1989\) Ltd.;](#)
- (u) [Rutherford Contracting Ltd.;](#)
- (v) [Shertine Construction Ltd.;](#)
- (w) [Silver Birch Contracting Ltd.;](#)
- (x) [Steelcore Construction Ltd.;](#)
- (y) [Tambro Construction Ltd.;](#)
- (z) [W.E. Marshall Construction \(1986\) Ltd.;](#)
- (aa) [W.S. Morgan Construction Ltd.](#)

1.3.2 The following mechanical Subcontractors are prequalified for the Work:

- (a) [Anvi Services Ltd.;](#)
- (b) [CEC Mechanical Ltd.;](#)
- (c) [Division 15 Plumbing & Mechanical Inc.;](#)
- (d) [H.S. St. Amant & Sons Inc.;](#)
- (e) [JMR Mechanical & Electrical Contractors;](#)
- (f) [Litek Mechanical Services Inc.;](#)

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------


- (g) [Marnoch Electrical Services Inc. \(MFM\);](#)
- (h) [Pipe All Plumbing & Heating Ltd.;](#)
- (i) [Sexton's Mechanical Ltd.;](#)
- (j) [Soan Mechanical Ltd.;](#)
- (k) [Stellar Mechanical Inc.;](#)
- (l) [Swift Mechanical Services Inc.;](#)
- (m) [Western Mechanical Electrical Millwright Services Ltd.](#)

1.3.3 The following electrical Subcontractors are prequalified for the Work:

- (a) [Abercrombie Electric Company Ltd.;](#)
- (b) [B.C. North Electrical;](#)
- (c) [Brian's Little Electric Ltd.;](#)
- (d) [C. Georges Electrical Inc.;](#)
- (e) [CEC Services Ltd.;](#)
- (f) [Horse Power Electrical Maintenance & Contracting Corp.;](#)
- (g) [J.M.R. Electric Ltd.;](#)
- (h) [KB Electrical;](#)
- (i) [Marnoch Electrical Services Inc.;](#)
- (j) [Minnings Electric Services Ltd.;](#)
- (k) [N.S.E. 2000 Inc.;](#)
- (l) [Pentor Electric;](#)
- (m) [Star Electrical Services Inc.;](#)
- (n) [Walker's Electric 2000;](#)
- (o) [Wallwin Electric Services Ltd.;](#)
- (p) [Western Mechanical Electrical Millwright Services Ltd.](#)

1.3.4 Not used.

1.3.5 The Owner reserves the right to issue one or more addenda naming additional Prequalified Contractors and/or additional prequalified Subcontractors.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- 1.3.6 Only Prequalified Contractors are eligible to participate in this Bid Process and to submit a Bid. Submissions received from those who are not a Prequalified Contractor will not be considered.

1.4 THE BID CONTRACT

- 1.4.1 The Bidders and the Owner acknowledge it is their intention to create a process contract, sometimes referred to as “Contract A” (the “**Bid Contract**”), between the Owner and each Bidder whose Bid meets all Mandatory Requirements. The Bidders and the Owner further acknowledge that if a Bid Contract is created between the Owner and one or more Bidders, the terms of the Bid Contract are represented by the Bid Documents and include an obligation on the successful Bidder, if any, to sign the Contract.


1.5 BIDDERS’ EXPENSES

- 1.5.1 Bidders shall bear all costs and expenses incurred by them in any way related to any aspect of their participation or intended participation in this Bid Process including, without limitation, all costs and expenses related to a Bidder’s involvement in:
- (a) due diligence, investigations, and information gathering processes;
 - (b) attendances and/or participation at any and all site visits and/or meetings;
 - (c) the preparation and submission of a Bid and responding to Requests for Additional Information.

2. DEFINITIONS

Capitalized terms used in the Instructions to Bidders and not otherwise defined in this Article or elsewhere in these Instructions to Bidders shall have the meanings ascribed to them in the Definitions to the Contract. All references in the Instructions to Bidders to “Article”, “Section” or “paragraph” shall, unless specifically indicated otherwise, refer to an Article, Section or paragraph of these Instructions to Bidders.

- 2.1.1 “**Adjusted Bid Price**” has the meaning set out in the table in paragraph 10.4.1.
- 2.1.2 “**Bid**” means all documents and information submitted through and/or uploaded to the Portal by a Bidder in response to and in accordance with these Instructions to Bidders, together with the documents and information specified in paragraph 9.4.2(b) and Section 10.2, where applicable.
- 2.1.3 “**Bidder**” means a Prequalified Contractor that participates in this Bid Process, whether or not it submits a Bid. The term “**Bidder**” also includes a Prequalified Contractor prior to the submission of its Bid.
- 2.1.4 “**Bid Contract**” means the contract described in paragraph 1.4.1 for the evaluation of Bids and the execution of the Contract, if any.
- 2.1.5 “**Bid Coordinator**” is the person identified as such in paragraph 1.2.1(i).
- 2.1.6 “**Bid Documents**” means the documents listed in paragraph 3.2.1.
- 2.1.7 “**Bid Price**” has the meaning set out in paragraph 9.2.1.
- 2.1.8 “**Bid Process**” means the procurement process described in the Bid Documents which commences with the issuance of these Instructions to Proponents and ends on the earliest of the following:
- (a) the date on which the Contract is signed;
 - (b) the date on which the Bid Process is cancelled;


 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (c) the day after the expiry of the Irrevocability Period.
- 2.1.9 **“Board”** means the Board of Trustees of the Owner.
- 2.1.10 **“Conflict of Interest”** has the meaning set out in paragraph 13.2.1.
- 2.1.11 **“Contract”** means the written agreement to be signed between the Owner and the successful Bidder, in the form of CCDC 2 – 2008 stipulated price contract, as amended by Supplementary Conditions.
- 2.1.12 **“Evaluation Score”** has the meaning set out in paragraph 10.4.1.
- 2.1.13 **“Irrevocability Period”** has the meaning set out in paragraph 1.2.1(e).
- 2.1.14 **“Local Time”** means the time measured and recorded on the Portal.
- 2.1.15 **“Mandatory Requirements”** means the mandatory requirements listed in paragraph 10.3.1.
- 2.1.16 **“MFIPPA”** means the *Municipal Freedom of Information and Protection of Privacy Act* (Ontario).
- 2.1.17 **“Owner”** means Simcoe County District School Board and includes its employees, agents, trustees, officers and directors, whether involved with the Bid Process or not, and includes the Board.
- 2.1.18 **“Place of the Work”** has the meaning set out in paragraph 1.1.1.
- 2.1.19 **“Portal”** has the meaning set out in paragraph 3.1.1.
- 2.1.20 **“Prequalified Contractor”** has the meaning set out in paragraph 1.3.1.
- 2.1.21 **“Question Deadline”** is the date identified as such in paragraph 1.2.1(c).
- 2.1.22 **“Reports”** has the meaning set out in paragraph 4.1.1.
- 2.1.23 **“Request for Additional Information”** has the meaning set out in paragraph 10.2.1.
- 2.1.24 **“Security Documents”** has the meaning set out in paragraph 9.3.1.
- 2.1.25 **“Submission Deadline”** is the date and time identified as such in paragraph 1.2.1(d).
- 2.1.26 **“Supplementary Conditions”** means the Supplementary Conditions for the CCDC 2 – 2008 stipulated price contract included on the Portal.
- 2.1.27 **“Work”** means the total construction and related services described in the Bid Documents.

3. BID DOCUMENTS

3.1 ACCESS TO THE BID DOCUMENTS

- 3.1.1 The Bid Documents will be made available to Bidders through the online digital bidding system established for this Bid Process on the website hosted by eSolutions Group Limited at “www.bidsandtenders.ca” (the **“Portal”**). The Portal will include all Bid Documents as well as Reports and other relevant notices, information and communications.
- 3.1.2 Each Bidder is solely responsible to ensure that it:
- (a) registers with and obtains access to the Portal; and
 - (b) has the appropriate software to access, input, download and upload contents from and to the Portal; and

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (c) visits and reviews the Portal as frequently as is necessary to ensure that it has the most current information, documents and addenda.

Bidders are solely responsible for visiting and checking the Portal for new content and the Owner accepts no responsibility for any Bidder lacking any documents or information posted to the Portal.


- 3.1.3 If there is a conflict or inconsistency between an electronic version of any document included or posted to the Portal and any other version of the same document, whether in electronic or paper form, the electronic version on the Portal shall govern.

3.2 THE BID DOCUMENTS

- 3.2.1 Bidders should ensure they have and/or have access to all of the documents listed below (collectively the **"Bid Documents"**). A Bid will be deemed to have been prepared on the basis of all Bid Documents issued and posted to the Portal prior to the Submission Deadline, and the Owner accepts no responsibility for any Bidder lacking or not being able to access any part of the Bid Documents.
 - (a) Instructions to Bidders (this document).
 - (b) Supplementary Conditions.
 - (c) Specifications prepared by the Consultants.
 - (d) Drawings prepared by the Consultants.
 - (e) Addenda, if any.
- 3.2.2 Bidders should inform the Bid Coordinator immediately if any documents are missing or incomplete and/or upon finding any discrepancies or omissions in the Bid Documents.
- 3.2.3 The Bid Documents are made available only for the purpose of submitting Bids for the Work. Availability and/or use of the Bid Documents does not confer a license or grant for any other purpose.

4. BIDDERS' DUE DILIGENCE

- 4.1.1 In addition to the Bid Documents, the Portal may include the Owner's information, data and environmental, geotechnical or other reports prepared or obtained with respect to the Place of the Work (collectively the **"Reports"**). The Reports should not be considered a representation of the conditions of the entire Place of the Work and are provided for general information and guidance purposes only. The Owner does not guarantee the accuracy or completeness of the Reports nor assumes any responsibility for any interpretations or conclusions that Bidders may make or draw from the Reports.
- 4.1.2 Nothing in this Bid Process or in the Bid Documents or in the Reports is intended to relieve Bidders from undertaking their own research, investigations or other due diligence, or forming their own opinions and conclusions with respect to the Work, the Place of the Work, the Bid Documents, the Contract, and all other matters related to this Bid Process. The Owner (a) does not accept or assume any responsibility for any interpretations or conclusions that Bidders may make or draw from the Bid Documents or the Reports, (b) does not represent, warrant or guarantee that the Bid Documents or the Reports are complete, accurate or comprehensive or exhaustive, and (c) assumes no responsibility for the completeness or accuracy of the Bid Documents or the Reports, or anything else provided or made available by the Owner during this Bid Process.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- 4.1.3 No allowances will be made for additional costs and no claims will be entertained in connection with:
- (a) conditions which could reasonably have been ascertained by the Bidders through investigation or other due diligence undertaken prior to the Submission Deadline; and/or
 - (b) Work which is required and which is reasonably inferable from the Bid Documents and/or the Reports as being necessary.

5. COMMUNICATIONS, QUESTIONS AND ADDENDA

5.1 COMMUNICATIONS


- 5.1.1 Except as may be permitted in the Bid Documents, Bidders are not to communicate with or otherwise contact the Owner regarding this Bid Process at any time before execution of the Contract, if any. A Bidder's failure to comply with this paragraph may result in the disqualification of the Bidder and the rejection of its Bid.
- 5.1.2 Except where provided otherwise in these Instructions to Bidders, all communications with the Owner permitted by this Bid Process are to be in writing and:
- (a) if sent before the Submission Deadline, are to be submitted online through the Portal; and
 - (b) if sent after the Submission Deadline, are to be sent by e-mail to the Bid Coordinator and are to identify the Bid Process in the subject line.

5.2 BIDDERS' QUESTIONS

- 5.2.1 Bidders are encouraged to ask questions or request clarification with respect to any part of this Bid Process or any Bid Documents which do not appear to be clear. Questions received by the Question Deadline will be reviewed and if the Owner believes that a response is warranted, it will include the question and its answer in an addendum. Questions received after the Question Deadline may not be considered and may not be answered, although the Owner reserves the discretion, but has no obligation, to consider and respond to questions received after the Question Deadline. In responding to questions the Owner may answer similar questions from different Bidders only once, may edit or rephrase the questions, and may ignore questions which, in the Owner's opinion, do not require a response.

5.3 ADDENDA

- 5.3.1 This Bid Process and the Bid Documents may be amended only by written addendum posted to the Portal. Answers, responses, clarifications, instructions or any other information provided by any other means, by any person, in whatever context or setting, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon by any Bidder, unless and until they are posted to the Portal in the form of an addendum.
- 5.3.2 Addenda will be posted on the Portal only and will not be sent or otherwise distributed to the Bidders. Bidders are solely responsible:
- (a) to visit and review the Portal for addenda, and the Owner shall not be responsible if any addenda are not obtained by a Bidder;
 - (b) to ensure they have received and that their Bid incorporates all addenda issued and posted to the Portal before the Submission Deadline and takes into account all resulting costs.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

Bidders will be required to confirm their Bid incorporates all addenda by so indicating in their Bid.

6. MANDATORY SITE MEETING

6.1 MANDATORY ATTENDANCE

6.1.1 The Owner has scheduled a mandatory site meeting at the location, date and time specified in paragraph 1.2.1(a). The purpose of the meeting is to review the Bid Process and to provide those in attendance an opportunity to ask questions and tour the Place of the Work.

6.1.2 Attendance at the site meeting is mandatory:

- (a) for Bidders;
- (b) Not used.

All persons attending the site meeting will be required to sign an attendance log to confirm their attendance.

6.2 CONSEQUENCES OF FAILING TO ATTEND THE MANDATORY SITE MEETING

6.2.1 Bids received from Bidders who fail to attend the mandatory site meeting, as determined from the attendance log, will not be considered.

6.2.2 Where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), then, Bids that fail to carry a prequalified Subcontractor that attended the mandatory site meeting, as determined from the attendance log, will not be considered.


6.3 INFORMATION OBTAINED AT THE MANDATORY SITE MEETING

6.3.1 Each Bidder acknowledges and agrees that:

- (a) notwithstanding the Owner may give answers and may provide information during the site meeting, such answers and information, whether in verbal or in written form, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon in any way by a Bidder, except and only to the extent expressly confirmed in an addendum;
- (b) anything said, written or done by the Owner or any other person, and any views or comments expressed in response to anything said or done during the site meeting, will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon in any way by a Bidder except and only to the extent expressly confirmed in an addendum.

7. SITE INVESTIGATION BY BIDDERS

7.1.1 Each Bidder is solely responsible, at its own cost and expense, to carry out its own independent research and due diligence and to perform any investigations considered necessary by the Bidder to satisfy itself as to the existence and/or locations of utilities and underground services and all other existing conditions, circumstances and limitations affecting the Place of the Work, the Work, the Bid Documents, the Contract, and all other matters related to this Bid Process. The Bidders'

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

obligations set out in this paragraph apply irrespective of the information contained in the Bid Documents or the Reports or that is made available to the Bidders during this Bid Process.

7.1.2 Bidders shall not undertake any investigation activities at the Place of the Work except as provided in this Article 7.

7.1.3 Bidders who would like an opportunity to undertake an investigation of the Place of the Work must submit an e-mail request to the Bid Coordinator. Such request must be received at least 2 business days before the Bidder's proposed date for the proposed investigation, provided that all investigations must be completed by the Question Deadline. The request must include:

- (a) the proposed date and time and alternate date and time for the proposed investigation;
- (b) the anticipated duration of the proposed investigation;
- (c) names, titles and contact information of who will be attending;
- (d) details of the proposed investigation, including who is proposed to carry out the investigation;
- (e) area(s) of the Place of the Work for which access is requested;
- (f) such other information as the Owner may reasonably require.

A Bidder's request will not be complete and an appointment for the investigation will not be scheduled until all of the required information has been provided.

7.1.4 If the Owner approves a Bidder's request to investigate the Place of the Work, the Owner will issue a written notification of the date and time on which the Bidder may attend at the Place of the Work, as well as the investigation activity(ies) which the Bidder is authorized to undertake, and the duration of such activity(ies). A representative of the Owner may attend to monitor the Bidder's activities.


7.1.5 Bidders acknowledge that unforeseen circumstances may arise and the Owner may, in its sole discretion, cancel, reschedule and/or modify the Bidder's visit and/or investigation activities on short notice or no notice to the Bidder.

7.1.6 Each Bidder acknowledges and agrees:

- (a) that anything said, written or done by the Owner or its representatives, and any views or comments expressed in response to anything said or done during the investigation of the Place of the Work will not in any way bind the Owner or amend this Bid Process or any Bid Documents, and are not to be relied upon by any Bidder;
- (b) to waive any and all right to contest, claim, complain, protest and/or dispute this Bid Process based on the fact that findings, information, results or data may have been obtained by another Bidder as a result of that Bidder's investigation of the Place of the Work, that were not obtained by, shared with, or provided to other Bidders.

7.1.7 Bidders shall, for their own forces and for their agents, consultants, contractors, subcontractors and all others attending at the Place of the Work with them or on their behalf:

- (a) assume overall responsibility for compliance with all aspects of the applicable workers' compensation and health and construction safety legislation and all related rules, regulations and practices, and shall ensure that appropriate occupational health and safety instruction and training are provided to all those attending the Place of the Work;

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (b) perform only investigations authorized by the Owner;
- (c) avoid disturbing and take all reasonable steps necessary to promote and maintain the safety of the occupants of the Place of the Work and any adjacent properties and the public in general;
- (d) respect and comply with local regulations and the Owner's requirements regarding permitted work hours and noise levels;
- (e) indemnify and save the Owner harmless from, and be responsible for, all claims, demands, losses, costs or damages related to or arising from any activities performed by the Bidder or anyone attending with or on behalf of the Bidder at the Place of the Work, whether or not authorized by the Bidder or the Owner.


8. DESIGNATED SUBSTANCES

- 8.1 Without limiting the obligations of the bidders set out in Article 5, where the Place of the Work is within or part of an existing building, bidders should note they may encounter designated substances such as lead, mercury, silica, asbestos-containing material ("ACM"), benzene, arsenic, etc. If applicable, a list of designated substances present at the Place of the Work has been provided to all bidders and, if ACM is included in the list of designated substances, a report has also been provided indicating the condition and location of any ACM that may be present at the Place of the Work (collectively the "OHSA Reports").
- 8.2 In carrying out the Work under the Contract, bidders shall ensure they do not handle, deal with, disturb or remove any designated substance whether identified in the OHSA Reports or not, unless included in the Work required by the Bid Documents. Should a bidder determine, prior to the Closing Date, that the Work cannot be completed without handling, dealing with, disturbing or removing any designated substance identified in the OHSA Reports (and the Work does not otherwise require the bidder to handle, deal with, disturb and/or remove such substance), it shall immediately notify the Owner and the Consultant in writing so that, if necessary, instructions and/or clarifications may be issued in the form of an addendum.
- 8.3 All information provided to or obtained by bidders in connection with this bid process, including all Reports, Data and the OHSA Reports, are and shall remain the property of the Owner and must be treated as confidential whether or not a contract is awarded, and which confidentiality obligations shall survive termination of the bid process. Such information is not to be used for any purpose other than submitting a Bid.

9. INSTRUCTIONS FOR BID COMPLETION

9.1 BID COMPLETION

- 9.1.1 Bids which are completed and/or submitted by any means other than as set out in this Article 9 will not be considered.
- 9.1.2 Bidders shall:
- (a) provide, input, post and/or upload all requested information and shall fill in all spaces and blanks on the Portal, as provided in Section 9.2; and
 - (b) submit the Security Documents described in Section 9.3 in accordance with and as provided in Section 9.4.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- 9.1.3 Bidders shall ensure all required information and documents are submitted through and uploaded / posted to the Portal BEFORE the Submission Deadline. Bidders who fail to do so before the Submission Deadline will be unable to submit their Bid.

9.2 INSTRUCTIONS

- 9.2.1 Bid Price. Bidders shall input in the space provided on the Portal the fixed, all-inclusive lump sum price for the Work (the “**Bid Price**”). The Bid Price shall exclude the Harmonized Sales Tax (HST) but shall include all other applicable taxes and duties.

- 9.2.2 Listing Subcontractors.

- (a) If required, Bidders shall input a list of the Subcontractors proposed to perform or supply an item of the Work identified on the Portal. Failure to do so may result in the Bid being declared non-compliant.
- (b) Where the Owner has prequalified one or more Subcontractors to perform or supply an identified item of the Work, Bidders shall select only a prequalified Subcontractor to perform or supply that item of Work. Failure to do so may result in the Bid being declared non-compliant.
- (c) Where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), Bidders shall select and carry only a prequalified Subcontractor that attended the mandatory site meeting, as determined from the attendance log. Failure to do so will result in the Bid being declared non-compliant.
- (d) Where a Bidder lists “own forces” in place of a Subcontractor, the Bidder shall perform such item of the Work with its own forces. In such case the Owner reserves the right to obtain information from the Bidder and from third parties respecting the qualifications and experience of the Bidder’s own forces for such item of the Work. If the Owner determines, acting reasonably, that the Bidder’s own forces are not qualified or experienced to perform such item of the Work, the Owner may declare the Bid non-compliant.


- 9.2.3 Unit, Separate, Itemized and Alternative Prices. If required, Bidders shall submit the following prices, all of which shall exclude the Harmonized Sales Tax (HST) but shall include all other applicable taxes and duties:

- (a) unit prices;
- (b) separate prices for work, if any, which is not included in the Bid Price and which the Owner may add for the amount(s) indicated;
- (c) itemized prices for Work, if any, which is included in the Bid Price and which the Owner may delete for the amount(s) indicated;
- (d) alternative prices for work, if any, which is not included in the Bid Price and which the Owner may substitute for Work which is included in the Bid Price for the amount(s) indicated.

The Owner reserves the right to accept or reject any or all unit, separate, itemized and alternative prices submitted, and such prices shall remain in effect for the duration of the Contract.

9.3 SECURITY DOCUMENTS

- 9.3.1 Each Bidder shall submit the form of bid security specified or permitted in paragraph 1.2.1(f), as further described in paragraph 9.3.2. Where applicable, Bidders shall also submit the agreement

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

to bond / surety's consent specified in paragraph 9.3.3 (the bid security and, where applicable, the agreement to bond / surety's consent are collectively referred to as the "**Security Documents**").

9.3.2 Bid Security.

- (a) Where the bid security specified in paragraph 1.2.1(f) is a digital bid bond, the digital bid bond shall be in the amount of 10% of the Bid Price in the form CCDC 220 – 2002 naming "Simcoe County District School Board" as obligee and issued by a surety licensed to conduct surety and insurance business in Canada. The bid bond shall remain valid for at least the duration of the Irrevocability Period. No other form of bid bond is acceptable.
- (b) Not used.
- (c) Not used.

The bid security of the successful Bidder will be retained by the Owner as compensation towards the damages the Owner will suffer should the successful Bidder fail to sign the Contract and/or fail to provide the specified performance security and/or otherwise breach the Bid Contract.

9.3.3 Agreement to Bond / Surety's Consent. Each Bidder that submits bid security in the form of a digital bid bond shall also submit an agreement to bond or surety's consent issued by the same surety that provides the digital bid bond, undertaking to provide a performance bond and a labour and material payment bond, each in the amount of fifty percent (50%) of the Bid Price. The agreement to bond / surety's consent shall remain valid for at least the duration of the Irrevocability Period.

9.3.4 Bidders shall include the costs of all Security Documents in their Bid Price.

9.4 DELIVERY OF THE SECURITY DOCUMENTS

9.4.1 Each Bidder that intends to submit bid security in the form of a digital bid bond shall:

- (a) upload or post the digital bond described in paragraph 9.3.2(a) to the Portal; and
- (b) upload or post to the Portal a scanned copy (in "pdf" format) of the agreement to bond or surety's consent described in paragraph 9.3.3.

9.4.2 Not used.

9.4.3 Bids that do not comply with this Section 9.4 will be declared non-compliant.

9.5 BID IRREVOCABILITY


9.5.1 Each Bid shall be irrevocable and shall remain open for consideration by the Owner for the duration of the Irrevocability Period.

10. EVALUATING BIDS

10.1 GENERAL

10.1.1 Bids will be reviewed and evaluated by the Owner in private.

10.1.2 Notwithstanding anything else contained in the Bid Documents, the award of the Contract, if any, shall be subject to the approval of the Board, in its sole and unfettered discretion. Bidders shall have no claims whatsoever against the Owner or the Board arising out of the exercise of authority

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------


by the Board, and/or in the event the Owner, in its sole and unfettered discretion, and for any or no reason, decides not to award the Contract.

10.2 REQUESTS FOR ADDITIONAL INFORMATION

- 10.2.1 The Bid Coordinator, on behalf of the Owner, may contact any one or more Bidders to request clarification of any information or documents submitted as part of a Bid, or to request supplementary information (collectively, “**Request for Additional Information**”), without any obligation to make the same or any Request for Additional Information of any other Bidder. Notwithstanding the preceding sentence, the Owner has no obligation to make any Request for Additional Information.
- 10.2.2 Bidders shall respond to all Requests for Additional Information within the time and in the manner stipulated in each Request for Additional Information, and any response received will form an integral part of a Bidder’s Bid. If a Bidder fails to respond to a Request for Additional Information, its Bid will be considered and evaluated based solely on the original Bid contents submitted.
- 10.2.3 A Bidder’s response to a Request for Additional Information shall not be an opportunity for the Bidder to either correct errors or to change its Bid in any substantive manner. Subject to that, information, prices, rates and documents submitted in response to a Request for Additional Information shall form part of a Bidder’s Bid.

10.3 MANDATORY REQUIREMENTS

- 10.3.1 Subject to paragraph 10.3.2, only Bids which are submitted through the Portal before the Submission Deadline and which meet all of the mandatory requirements listed below (collectively, the “**Mandatory Requirements**”) on a “pass/fail” basis will be eligible for evaluation and award of the Contract:
- (a) the Bidder is a Prequalified Contractor; and
 - (b) the Bidder attended the mandatory site meeting, as determined from the attendance log; and
 - (c) where the Owner has required that prequalified Subcontractors attend the mandatory site meeting, as indicated in paragraph 6.1.2(b), the Bid includes prequalified Subcontractor(s) that attended the mandatory site meeting, as determined from the attendance log;
 - (d) the Bid includes the specified Security Documents and complies with Section 9.4; and
 - (e) the Bid substantially complies with the requirements of the Bid Documents. In this respect, the Owner reserves the right, in its sole and unfettered discretion, to waive minor errors and matters of non-compliance contained in a Bid.
- 10.3.2 If all Bids fail at least one of the Mandatory Requirements the Owner, in its sole discretion, may:
- (a) evaluate one or more Bids and proceed with the Bid Process and treat such Bid(s) as having met all of the Mandatory Requirements; and/or
 - (b) negotiate a Contract for the whole or any part of the Work with any Bidder; and/or
 - (c) take any action in accordance with paragraph 12.2.1.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

10.4 EVALUATION

10.4.1 Only Bids which pass all of the Mandatory Criteria or that are selected in accordance with paragraph 10.3.2(a) will be awarded points based on criteria set out below. The points awarded to each Bid will be its “**Evaluation Score**”.

Evaluation Criteria	Points Available
Bid Price offered, as it may be adjusted by the amount of any separate, itemized and/or alternative price(s) which the Owner, in its discretion, decides to accept (“ Adjusted Bid Price ”). For certainty, where the Owner does not accept any separate, itemized or alternative prices, the Adjusted Bid Price will be the same as the Bid Price.	100
MAXIMUM POINTS AVAILABLE	100

10.4.2 A Bidder’s Evaluation Score will be calculated in accordance with the formula below:

- (a) the Bidder with the lowest Adjusted Bid Price will be awarded 100 points;
- (b) the points to be awarded to each of the other Bidders will be calculated as follows:

$$\frac{\text{lowest Adjusted Bid Price}}{\text{other Bidder's Adjusted Bid Price}} \times 100 = \text{points awarded}$$

10.4.3 If there is a tie in the Evaluation Score of two or more Bids, the tie will be broken by a coin toss or by the drawing of lots performed by the Owner in the presence of the tied Bidders.

11. AWARD OF THE CONTRACT, DOCUMENTS TO BE DELIVERED, AND SIGNING THE CONTRACT


11.1 AWARD OF THE CONTRACT

11.1.1 Subject to receiving the approval of the Board, and subject to the other provisions of the Bid Documents, if the Owner decides to award the Contract it will issue an award letter to the Bidder that submitted the Bid which received the highest Evaluation Score.

11.2 DOCUMENTS TO BE DELIVERED

11.2.1 Within 10 business days of receiving an award letter from the Owner the successful Bidder shall deliver to the Owner:

- (a) where the Bidder submitted an agreement to bond / surety’s consent, the Bidder shall deliver the performance bond and the labour and material payment bond described in the Bid Documents, the forms of such bonds to comply with the requirements of the Contract;
- (b) certified true copies of the insurance policies required by the Contract or certificates of insurance, at the option of the Owner;
- (c) the Bidder’s current WSIB clearance certificate;

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (d) the Bidder's health and safety policy for the Work; and
- (e) a copy of the notice of project issued by the Ministry of Labour naming the Bidder as the "constructor" for the Work.

11.2.2 A Bidder's failure to comply with paragraph 11.2.1 will constitute a breach of the Bid Contract.

11.3 SIGNING THE CONTRACT

11.3.1 The successful Bidder shall sign the Contract and shall deliver the signed original to the Owner within 10 business days of the Bidder's receipt of the execution copy of the Contract. A Bidder's failure to comply with this paragraph will constitute a breach of the Bid Contract.

12. OWNER'S RIGHTS

12.1 GENERAL

12.1.1 In addition to any other express rights contained in the Bid Documents or any other rights which may be implied in the circumstances, the Owner reserves the right to exercise any or all or a combination of the rights described in this Article. The Owner shall not be liable for any costs, expenses or damages incurred or claimed by a Bidder resulting from the Owner's exercise of any of its rights.

12.1.2 A Bidder's submission or the Owner's evaluation of any Bid, even where only one Bid is submitted before the Submission Deadline and even where only one Bid meets all Mandatory Requirements, will not obligate the Owner to accept any Bid, award the Contract, or proceed further with this Bid Process.


12.2 THE OWNER'S RIGHTS

12.2.1 The Owner may, in its sole discretion, and for any or no reason:

- (a) reject any or one or more or all Bids, even if only one Bid is received;
- (b) reject the whole or any part of any Bid;
- (c) accept the whole or any part of a Bid;
- (d) if only one Bid meets all of the Mandatory Requirements, elect to accept or reject all or any part of it;
- (e) cancel this Bid Process at any time before the award of the Contract;
- (f) cancel this Bid Process at any time before the award of the Contract and issue a new procurement process for work which is same or similar to the Work, with the same or different participants.

12.2.2 The Owner reserves the right to:

- (a) waive minor errors and matters of non-compliance contained in a Bid;
- (b) adjust an Evaluation Score or reject a Bid on the basis of information received in response to a Request for Additional Information;

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (c) disqualify any Bidder whose Bid contains misrepresentations or any other inaccurate or misleading information relating to matters which the Owner, in its sole discretion, considers material;
- (d) where the Owner has accepted any separate, itemized and/or alternative price(s) offered by the Bidders, the Owner reserves the right to award the Contract to other than the Bidder with the lowest Bid Price.

13. GENERAL

13.1 PROHIBITION ON LOBBYING AND COLLUSION

13.1.1 Bidders and their directors, officers, employees, consultants, agents, advisors and other representatives are strictly prohibited from engaging in conduct which is or could reasonably be considered as any form of political or other lobbying, or as an attempt to influence the outcome of this Bid Process. Without limiting the generality of the foregoing, and except as provided in the Bid Documents, no such person shall contact, communicate with or attempt to contact or communicate with, directly or indirectly and in any manner whatsoever, any staff, personnel or representative of the Owner or the Board in connection with this Bid Process, including for the purpose of:

- (a) commenting on, or attempting to influence the views on, the merits of the Bidder's Bid, or in relation to the Bids of other Bidders;
- (b) influencing or attempting to influence the evaluation of the Bids;
- (c) promoting the Bidder or its interests, including in preference to that of other Bidders;
- (d) commenting on or criticizing aspects of this Bid Process, the Bid Documents, the Work, or the Contract, including in a manner which may give the Bidder a competitive or other advantage over other Bidders;
- (e) criticizing other Bidders or the Bids of other Bidders.


13.1.2 Bidders and their directors, officers, employees, consultants, agents, advisors and other representatives are prohibited from communicating with or attempting to contact or communicate with, directly or indirectly and in any manner whatsoever, any information whatsoever regarding the preparation of a Bid to any other Bidder.

13.1.3 Failure of a Bidder to comply with this Section may result in the disqualification of the Bidder and the rejection of its Bid.

13.2 CONFLICT OF INTEREST

13.2.1 Bidders shall disclose all perceived, potential and actual Conflicts of Interest. For the purposes of this Bid Process, "**Conflict of Interest**" includes:

- (a) any situation or circumstances where, in relation to this Bid Process, the Work, and/or the Contract, the Bidder's other commitments, relationships or financial interests could or could be perceived to exert an improper influence over the objective, unbiased and impartial exercise of independent judgment by any member or representative of the Owner or the Board;
- (b) any situation or circumstances where any person employed by the Owner in any capacity:
 - (i) has a direct or indirect financial or other interest in any Bidder;

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- (ii) is an employee or a consultant to or under contract to any Bidder;
- (iii) is negotiating or has an arrangement concerning future employment or contracting with any Bidder;
- (iv) has an ownership interest in or is an officer or director or partner of any Bidder.

13.2.2 If a Bidder discovers, before or after the Submission Deadline, any perceived, potential or actual Conflict of Interest, the Bidder shall immediately send a written statement to the Bid Coordinator describing the perceived, potential or actual Conflict of Interest, along with a written proposal that, if implemented, would address the identified perceived, potential or actual Conflict of Interest. The Owner will review the Bidder's written statement and proposal and, without limiting the generality of Article 12, the Owner may, in its sole discretion:

- (a) disqualify the Bidder from participating in this Bid Process and reject its Bid;
- (b) waive any and all perceived, potential or actual Conflict of Interest upon such terms and conditions as the Owner, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately managed, mitigated and minimized.

13.2.3 Failure of a Bidder to comply with this Section may result in the disqualification of the Bidder and the rejection of its Bid.

13.3 CONFIDENTIALITY, DISCLOSURE AND MFIPPA


13.3.1 All information provided by or obtained from the Owner in connection with this Bid Process, the Work, and/or the Contract, including all Reports, is and shall remain the property of the Owner and must be treated as confidential, and such confidentiality obligations shall survive the Bid Process. Such information is not to be used for any purpose other than responding to this Bid Process and, upon conclusion of this Bid Process, if requested by the Owner, Bidders shall return all such information.

13.3.2 Bidders acknowledge that the contents of their Bids will be disclosed within the Owner's organization and/or to the Owner's consultants and advisors. The Owner will use reasonable efforts to protect sensitive and confidential information provided by the Bidders, however, the Owner shall not be liable in any way whatsoever if such information, or any part of it, is disclosed, even if the Owner, its consultants, advisors, staff or any other person associated with them may have been negligent with respect to such disclosure. By submitting a Bid each Bidder agrees to such disclosure and releases the Bid Coordinator and the Owner from any liability for the same.

13.3.3 The Owner may be required to disclose parts or all of a Bid pursuant to the provisions of MFIPPA or other legislation. Subject to the provisions of such legislation, the Owner will use reasonable efforts to safeguard the confidentiality of any information identified by a Bidder as confidential, however, the Owner shall not be liable in any way whatsoever if such information is disclosed based on an order or decision made under such legislation or any other applicable law. By submitting a Bid each Bidder agrees to such disclosure and releases the Bid Coordinator and the Owner from any liability for the same.

13.4 DEBRIEFING

13.4.1 Following the conclusion of this Bid Process, and provided the Contract has been signed, the Owner will offer separate debriefings to unsuccessful Bidders, but only if requested in accordance with paragraph 13.4.2. Debriefings will be held in person or by telephone conference call, at the

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

Owner's discretion, and will be scheduled on a date and time and for a duration to be confirmed by the Owner.

13.4.2 If an unsuccessful Bidder desires a debriefing it shall submit a written e-mail request to the Bid Coordinator within sixty (60) days after the expiry of the Irrevocability Period, failing which no debriefing will be provided.

13.4.3 Evaluations and scoring of Bids are confidential and during a debriefing the Owner will not provide critiques or discuss the scores or the merits of any Bid other than the Bid submitted by the Bidder that requested the debriefing.

13.5 PUBLIC STATEMENTS

13.5.1 Bidders shall not publish, issue, advertise, distribute or make any statements, postings, blogs or releases, electronic or otherwise, concerning their or any other Bid, the Bid Process, the Contract, the evaluation of Bids, or the award of the Contract, without the Owner's prior express written consent. A Bidder's failure to comply with this paragraph may result in the disqualification of the Bidder and the rejection of its Bid.

13.6 AWARD DOES NOT CONSTITUTE ENDORSEMENT

13.6.1 The Owner's award of the Contract, if any, does not constitute a general endorsement of the successful Bidder's work or services.

13.7 LIMIT OF LIABILITY

13.7.1 Each Bidder agrees that the liability of the Owner to any Bidder and the aggregate amount of damages recoverable against the Owner for any and all claims relating to or arising from this Bid Process including:


- (a) claims arising from negligence, wilful misconduct or other conduct; and/or
- (b) claims arising from a breach of the Bid Contract or any other contractual or other relationship or obligation that may arise as a result of a Bidder's participation in this Bid Process and/or submission of a Bid,

shall be limited to the Bidder's reasonable demonstrated costs of preparing its Bid.

13.8 DISPUTES

13.8.1 If a dispute arises in connection with this Bid Process including, without limitation, a dispute concerning the existence of the Bid Contract or a breach of the Bid Contract, or a dispute as to whether a Bid meets the Mandatory Requirements, the parties to the dispute agree:

- (a) to use their best efforts to resolve the dispute through amicable and good faith negotiations for a period of at least fifteen (15) days, having such written and oral communications and meetings as appropriate;
- (b) if the dispute is not resolved through negotiations the Owner, in its unqualified subjective discretion, may refer the dispute to confidential final binding arbitration before a single arbitrator, selected by the Owner, to be held at Barrie, Ontario pursuant to the *Arbitration Act, 1991* (Ontario), as amended. If the Owner refers the dispute to arbitration, each Bidder agrees that it is bound to arbitrate such dispute. Unless the Owner refers such dispute to arbitration, there shall be no arbitration of such dispute.

 Simcoe County District School Board	INSTRUCTIONS TO BIDDERS <i>Innisfil Central Public School</i> <i>Accessibility Alterations</i>	Tender No. 11251T
---	---	---------------------------------

- 13.8.2 The Owner may give notice of a dispute to one or more Bidders, each of whom shall be a party to and shall be entitled to participate in the negotiation and/or arbitration, as the case may be and, in the case of arbitration, each of whom shall be bound by the arbitrator's award, whether or not they participated in the arbitration.
- 13.8.3 If the Owner refers a dispute to arbitration, the parties to the arbitration shall exchange brief statements of their respective positions on the dispute, together with the relevant documents, and submit to an arbitration hearing which shall last no longer than two (2) days, subject to the discretion of the arbitrator to increase such time. The parties to the arbitration further agree that the arbitrator's award shall be final and binding and shall not be subject to appeal. The costs of the arbitrator and the venue shall be shared equally among the parties to the arbitration.

END OF DOCUMENT

PART 1: GENERAL

1.1 THE CONSULTANT (ARCHITECT)

- .1 Jeffery Architect
22 Blake Street,
Barrie, Ontario
L4M 1J6
Telephone: 705-739-1757
Fax No.: 705-739-6798

1.2 MECHANICAL ENGINEERING SUBCONSULTANT

- .1 John Angus & Associates Inc.
Meadowvale Corporate Centre
2000 Argentia Rd.
Plaza 4, Suite 100
Mississauga, Ontario
L5N 1W1

Telephone: 416-422-0999
Fax: 416-422-0999

1.3 ELECTRICAL ENGINEERING SUBCONSULTANT

- .1 Lonergan Engineering Inc.
4 Industrial Parkway South,
Aurora, Ontario
L4G 3W1

Telephone: 416-684-2305
Fax: 905-841-6999

END OF LIST OF CONSULTANTS

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO CCDC 2 – 2008

STIPULATED PRICE CONTRACT

These Supplementary Conditions modify, delete and/or add to the Agreement between Owner and Contractor, the Definitions and the General Conditions of the Stipulated Price Contract, Standard Construction Document CCDC 2 – 2008.

Where any article or paragraph in the CCDC 2 – 2008 document is supplemented by one of the following, the provisions of such article or paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto. Where any article or paragraph in the CCDC 2 – 2008 document is amended, deleted, or superseded by any of the following, the provisions of such article or paragraph not so amended, deleted or superseded shall remain in effect.

The CCDC 2 – 2008 document is amended as follows:

SC1. AGREEMENT BETWEEN OWNER AND CONTRACTOR

SC1.1 ARTICLE A-5 PAYMENT

- 1.1.1 Amend paragraph 5.1.3, in the first line, by deleting the words “the issuance of the” and replacing them with “receipt of the Consultant’s”.
- 1.1.2 Amend paragraph 5.3.1 as follows:
 - (a) Delete “2%” and replace it with “0%” in paragraph 5.3.1(1); and
 - (b) Delete “4%” and replace it with “2%” in paragraph 5.3.1(2).

SC1.2 ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- 1.2.1 Amend paragraph 6.1 by deleting the words “or other form of electronic communication” in the second and seventh lines.

SC1.3 ARTICLE A-9 TIME IS OF THE ESSENCE

- 1.3.1 Add a new Article A-9 as follows:

“ARTICLE A-9 TIME IS OF THE ESSENCE

- 9.1 The Contractor represents and warrants that it will attain Substantial Performance of the Work by the date stipulated in paragraph 1.3 of Article A-1 – THE WORK and acknowledges that it has been advised by the Owner that it is critical to the Owner that Substantial Performance of the Work is attained by such date. The Contractor agrees that time shall be of the essence in the performance of the Contractor’s obligations under this Contract.”

SC2. DEFINITIONS

SC2.1 Definitions

- 2.1.1 Amend Definition 4, “Consultant”, by adding the following to the end of that definition:

“For purposes of this Contract, the terms “Consultant”, “Architect” and “Engineer”, wherever used in the Contract Documents, shall be considered synonymous
- 2.1.2 Amend Definition 6, “Contract Documents”, by adding the words “in writing” after the word “upon” in the second line.
- 2.1.3 Amend Definition 12, “Owner”, by adding the following to the end of that Definition:

“For purposes of the Contract, the terms “Owner”, “SCDSB” and the “Board” shall be considered synonymous.”

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 2.1.4 Amend Definition 16, “Provide”, by adding the following to the end of that Definition:

“Provide has this meaning whether or not the first letter is capitalized.”

- 2.1.5 Add the following new Definitions:

27. As-Built Drawings

As-Built Drawings means drawings prepared by the Contractor by marking on a copy of the Drawings the changes from the Drawings which occur during construction including, but not limited to, the exact location of major building components and structures that were shown generally on the Drawings. For certainty, As-Built Drawings shall be in computer-aided design (CAD) format, as well as in hard copy and pdf formats.

28. Construction Schedule

Construction Schedule means the schedule for the performance of the Work provided by the Contractor pursuant to GC 3.5 – CONSTRUCTION SCHEDULE, including any amendments to the Construction Schedule made pursuant to the Contract Documents.

29. Environmental Programs

Environmental Programs means the environmental plans, programs, procedures and requirements of the Owner. The Environmental Programs include Owner’s asbestos control program, its mould program and a program for controlling and handling designated substances.

30. Install

Install means install and connect. Install has this meaning whether or not the first letter is capitalized.

31. Labour Dispute

Labour Dispute means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractor’s association of which the Contractor is a member or to which the Contractor is otherwise bound), job action, slow down, picketing, refusal to work or continue to work, refusal to supply materials, cessation of work or other labour controversy which does, or might, affect the Work.

32. OHSA

OHSA means the Occupational Health and Safety Act (Ontario), as amended, and all rules and regulations made thereunder.

33. WSIB

WSIB means the Ontario Workplace Safety & Insurance Board.”

SC3. GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

SC3.1 GC 1.1 CONTRACT DOCUMENTS

- 3.1.1 Amend paragraph 1.1.1 by adding the following to the end of that paragraph:

“If the Contractor finds discrepancies in, or omissions from, or has any doubt about the meaning or intent of any of the Contract Documents, the Contractor shall at once notify the Consultant.”

- 3.1.2 Amend paragraph 1.1.3 by adding the following to the end of that paragraph:

“The intent of the Contract Documents is to include all labour, Products, materials, Construction Equipment and services necessary or normally considered necessary for the performance of the Work in accordance with the Contract Documents. Any item of Work mentioned in the Contract Documents or reasonably inferable from the Contract Documents but not otherwise shown or described shall be provided by the Contractor as if shown or otherwise described or inferable. Any items omitted from the Contract Documents which are reasonably necessary or inferable for the completion of the Work, or

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

related work, shall be considered a portion of the Work and included in the scope of Work to be performed under this Contract.”

3.1.3 Amend paragraph 1.1.6 by adding new paragraphs 1.1.6.1 and 1.1.6.2:

“1.1.6.1 The Specifications shall be read as a whole and are the minimum construction requirements. Neither the organization nor the division of the Specifications nor anything else contained in the Contract Documents will be construed to place responsibility on the Consultant to settle disputes among the Subcontractors and Suppliers in respect to such organization or division.

1.1.6.2 The Drawings are, in part, diagrammatic and are intended to convey the scope of the Work and indicate elevations and general and approximate locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services. The Contractor shall obtain more accurate information and shall satisfy itself as to the conditions of the pre-grade elevations and the locations, arrangement and sizes of fixtures, equipment, outlets, utilities and underground services from study and coordination of the Drawings, including Shop Drawings, and shall satisfy itself and become familiar with conditions and spaces affecting these matters before proceeding with the Work. Where site conditions require reasonable minor changes in indicated locations and arrangements, the Contractor shall make such changes at no additional cost to the Owner. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the Contractor shall include such relocation in the Work. The Contractor shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible.”

3.1.4 Amend paragraph 1.1.7 by adding the following at the end of the paragraph:

“Notwithstanding the foregoing, if there is a conflict or discrepancy between Drawings or between Drawings and Specification or any other Contract Documents in relation to the Products to be supplied or the amount of labour or materials required to complete a particular item of Work, the Contractor shall supply and shall include in the Work the Products, labour and materials which would provide the greatest benefit to the Owner, as determined by the Owner.”

3.1.5 Delete paragraph 1.1.8 and replace it with the following:

“1.1.8 The Owner shall provide the Contractor, without charge, 6 copies of the Contract Documents. Additional copies of the Contract Documents may be obtained from the Consultant at a reasonable cost.”

SC3.2 GC 1.3 RIGHTS AND REMEDIES

3.2.1 Add a new paragraph 1.3.3 as follows:

“1.3.3 To be effective, a waiver of a right, remedy, duty or obligation under this Contract must be expressly written by an authorized representative of the party. For greater certainty, actions of the Owner which shall not constitute a waiver include, but are not limited to, the following:

- .1 making payments to the Contractor;
- .2 any partial or entire use or occupancy of the Project by the Owner;
- .3 final acceptance of the Work by the Owner;
- .4 failure of the Owner or its representatives to object to known defects;
- .5 specifying a list of defects will not be held a waiver of defects not listed.”

SC3.3 GC 2.2 ROLE OF THE CONSULTANT

3.3.1 Amend paragraph 2.2.7 by deleting the words “Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER” from the beginning of the paragraph.

3.3.2 Amend paragraph 2.2.13 by adding the following to the end of that paragraph:

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

"If, in the opinion of the Contractor, a Supplemental Instruction involves an adjustment in the Contract Price or the Contract Time, the Contractor shall, within five (5) Working Days of receipt of the Supplemental Instruction, provide the Consultant with a written notice to that effect and shall await further instructions. The Contractor's failure to provide such written notification within the time stipulated in this paragraph shall be deemed an acceptance of the Supplemental Instruction by the Contractor without adjustment in the Contract Price or Contract Time. Without limiting the generality of the foregoing, every item on the Drawings shall be deemed to be included within the scope of the Work, unless noted 'not in contract'."

3.3.1 Add a new paragraph 2.2.19 as follows:

"2.2.19 Neither the Contractor nor any Subcontractor or Supplier shall have any claim against the Consultant as a result of the performance or non-performance of the Consultant's services. The Contractor shall include this provision in any contracts it makes with its Subcontractors and Suppliers, and shall require such Subcontractors and Suppliers to include the same term in their contracts with their subcontractors and suppliers."

SC3.4 GC 2.3 REVIEW AND INSPECTION OF THE WORK

3.4.1 Amend paragraph 2.3.5 by adding the following to the end of the second sentence:

" , and there shall be no extensions of the Contract Time resulting from any delay caused by such examination and correction."

SC3.5 GC 2.4 DEFECTIVE WORK

3.5.1 Add new paragraphs 2.4.1.1 and 2.4.1.2 as follows:

"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 Owner or 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 operations of the Owner."

SC3.6 GC 3.0 PRE-CONSTRUCTION SUBMITTALS

3.6.1 Add a new GC 3.0 as follows:

"GC 3.0 PRE-CONSTRUCTION SUBMITTALS

3.0.1 Prior to site mobilization, the Contractor shall submit to the Owner:

- .1 a current WSIB clearance certificate;
- .2 certified true copies of the Contractor's insurance policies having application to the Project or certificates of insurance, at the option of the Owner;
- .3 the bonds described in GC 11.2 – CONTRACT SECURITY;
- .4 documentation of the Contractor's in-house safety program to be implemented for the Project;
- .5 a copy of the Notice of Project filed with the appropriate Ministry naming the Contractor as "constructor" under the OHSA; and
- .6 the Construction Schedule referred to in paragraph 3.5.1.1 of GC 3.5 – CONSTRUCTION SCHEDULE."

SC3.7 GC 3.1 CONTROL OF THE WORK

3.7.1 Add new paragraphs 3.1.3 to 3.1.6 as follows:

"3.1.3 Notwithstanding paragraphs 3.1.1 and 3.1.2, the Contractor agrees that it shall fully incorporate and comply with all policies and procedures of the Owner which are relevant to

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

any activity to be performed under the Contract. The Contractor shall inquire from the Owner if such policies or procedures exist and the Owner agrees that it will use reasonable efforts to communicate to the Contractor all relevant policies or procedures.

- 3.1.4 Prior to commencing fabrication and construction activities, the Contractor shall verify all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the Work and shall further carefully compare such field measurements and conditions with the requirements of the Contract Documents. Where dimensions are not included or exact locations are not apparent, the Contractor shall immediately notify the Consultant in writing and shall obtain written instructions from the Consultant before proceeding with any part of the affected Work.
- 3.1.5 The Contractor shall be entirely responsible for the proper laying out of the whole of the Work. The Contractor shall employ an experienced and licensed land surveyor to establish and check grades, benchmarks, references, elevations, points and lines as from time to time may be required for the purposes of the Work, or layout of same, and the Contractor shall at every appropriate stage of the Work take all proper steps to have all proper checks and surveys made so as to ensure that the Work and all components thereof will be wholly within the boundaries of the Project site and in the exact position (or respective positions) established for such Work, and shall assume full responsibility for the correctness of all such lines, levels and measurements.
- 3.1.6 The Contractor shall perform the Work in accordance with modern practice and shall employ only good workmanship in accordance with the Contract Documents, applicable laws, ordinances, rules, regulations, or codes relating to the performance of the Work. Without limiting the generality of the foregoing, the Contractor is responsible for the coordination of the various parts of the Work so that no part shall be left in an unfinished or incomplete condition owing to any disagreement between Subcontractors, or between any of the Subcontractors and the Contractor as to where the Work of one begins or ends with relation to the Work of the other.”

SC3.8 GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

- 3.8.1 Delete paragraphs 3.2.2.1 and 3.2.2.2.
- 3.8.2 Amend paragraph 3.2.3.2 by deleting the semi-colon towards the end of that paragraph and adding the following after the words “schedules and”:
- “co-ordinate and schedule the activities and work of other contractors and Owner’s own forces with the Work of the Contractor and connect as specified or shown in the Contract Documents;”
- 3.8.3 Amend paragraph 3.2.3.3 by adding the following to the end of that paragraph:
- “Failure by the Contractor to so report shall invalidate any claims against the Owner by reason of the deficiencies in the work of other contractors or Owner’s own forces except those deficiencies not then reasonably discoverable.”
- 3.8.4 Add a new paragraph 3.2.3.4 as follows:
- “3.2.3.4 assume overall responsibility for compliance with all aspects of the applicable health and construction safety legislation at the Place of the Work, including all the responsibilities of the “constructor” under the OHSA.”
- 3.8.5 Add a new paragraph 3.2.7 as follows:
- “3.2.7 If the Contractor is of the view that the work of other contractors or the work of the Owner’s own forces will compromise, void or nullify any of the warranties to be provided pursuant to this Contract, the Contractor shall give Notice in Writing to the Owner as soon as reasonably possible and shall include in such notice the reasons why, in the Contractor’s view, a warranty or warranties will be compromised, voided or nullified, together with the Contractor’s recommendations for avoiding such result.”

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

SC3.9 GC 3.4 DOCUMENT REVIEW

- 3.9.1 Amend paragraph 3.4.1 by deleting the second and third sentences of that paragraph and replacing them with the following:

“Such review by the Contractor shall meet the standard of care described in GC 3.14 – STANDARD OF CARE. Except for the obligation to make such review and report the result, the Contractor does not assume any responsibility to the Owner or the Consultant for the accuracy of the Contract Documents. Provided it has exercised the degree of care and skill described in this paragraph, the Contractor shall not be liable for damages or costs resulting from such errors, inconsistencies, or omissions in the Contract Documents, which the Contractor did not discover.”

- 3.9.2 Add new paragraphs 3.4.2 and 3.4.3 as follows:

“3.4.2 Notwithstanding the foregoing, errors, inconsistencies, discrepancies and/or omissions shall not include lack of reference on the Drawings or in the Specifications to labour and/or Products that are required or normally recognized within respective trade practices as being necessary for the complete execution of the Work.

3.4.3 If the Contractor finds discrepancies in and/or omissions from the Contract Documents or has any doubt as to the meaning or intent of any part thereof, the Contractor must immediately notify the Consultant, who will provide written instructions or explanations. Neither the Owner nor the Consultant will be responsible for oral instructions.”

SC3.10 GC 3.5 CONSTRUCTION SCHEDULE

- 3.10.1 Delete paragraph 3.5.1 and replace it with the following:

“3.5.1 The Contractor shall:

- .1 within ten (10) Working Days of signing this Contract submit to the Owner, for the Owner’s approval, a Construction Schedule that indicates the timing of major activities and critical milestone dates for the Project, demonstrating that the Work will be performed in conformity with the Contract Time. Such schedule:
 - (A) shall be in editable electronic format approved by the Owner and shall include and show all logic links between activities; and
 - (B) shall be prepared in collaboration with, and supported by, the Subcontractors and Suppliers whose activities affect the critical path of the Work, and
 - (C) shall include and make provision for statutory holidays, the rectification of defects and deficiencies, and all warranty obligations, and
 - (D) shall provide sufficient detail of the critical events and their inter-relationship and shall include a baseline schedule indicating the critical path for the Project; and
- .2 provide the expertise and resources, including manpower and Construction Equipment, as are necessary to maintain progress under the Construction Schedule or any successor or revised schedule approved by the Owner; and
- .3 monitor the progress of the Work relative to the Construction Schedule or any successor or revised schedule approved by the Owner and update the Construction Schedule on a monthly basis or at such other interval as instructed by the Owner and/or the Consultant; and
- .4 advise the Consultant and the Owner in writing of any variation from the baseline or slippage in the Construction Schedule within 24 hours of such variation or slippage becoming apparent; and
- .5 at each site meeting, provide (in writing or verbally to be recorded in minutes) to the Owner and the Consultant a look-ahead schedule indicating the major activities to be undertaken or constructed in the next month.”

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

3.10.2 Add new paragraphs 3.5.2, 3.5.3 and 3.5.4 as follows:

- “3.5.2 If at any time it should appear to the Owner or the Consultant that the actual progress of the Work is behind the Construction Schedule or any other schedule or is likely to fall behind schedule, based on critical path methodology, or if the Contractor has so advised the Consultant pursuant to paragraph 3.5.1.3, the Contractor shall take appropriate steps to cause the actual progress of the Work to conform to the Construction Schedule and shall produce and present to the Owner and the Consultant a recovery plan demonstrating how the Contractor will achieve the recovery of the Construction Schedule. If the Contractor intends to apply for a change in the Contract Price in relation to a schedule recovery plan, the Contractor shall proceed pursuant to GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 3.5.3 If after applying the expertise and resources required under paragraphs 3.5.1 and 3.5.2 the Contractor forms the opinion that the slippage in the Construction Schedule or any other schedule cannot be recovered by the Contractor, it shall give Notice in Writing to the Consultant and the Owner if the Contractor intends to apply for an extension of Contract Time.
- 3.5.4 Without limiting the other obligations of the Contractor under GC 3.5, the Contractor shall not amend the Construction Schedule without the prior written consent of the Owner. In addition, at each site construction meeting, the Contractor shall provide to the Owner and the Consultant a two (2) week look-ahead schedule indicating the major activities to be undertaken or constructed in such two (2) week period.”

SC3.11 GC 3.6 SUPERVISION

3.11.1 Amend paragraph 3.6.1 by adding the following to the end of that paragraph:

“, and upon the Contractor obtaining the Owner’s prior written consent, which consent will not be unreasonably withheld.”

3.11.2 Add a new paragraph 3.6.3 as follows:

“3.6.3 The Owner, acting reasonably, shall have the right to order the Contractor to remove from the Project any representative or employee of the Contractor, Subcontractors or Suppliers who, in the opinion of the Owner, are a detriment to the Project.”

SC3.12 GC 3.7 SUBCONTRACTORS AND SUPPLIERS

3.12.1 Add new paragraph 3.7.1.4 as follows:

“3.7.1.4 ensure that all Subcontractors and Suppliers, and anyone employed or engaged by them directly or indirectly, have the qualifications, technical skills, levels of experience and knowledge required (including with respect to all applicable health and construction safety rules and regulations), and all applicable permits, licenses and approvals necessary, to discharge the work to be performed by them in accordance with the terms of the Contract.”

3.12.2 Amend paragraph 3.7.2 by adding the following to the end of that paragraph:

“The Contractor agrees not to change Subcontractors without the prior written consent of the Owner, which consent will not be unreasonably withheld.”

3.12.3 Amend paragraph 3.7.3 by deleting the words “before the Owner has signed the Contract” in the first line of that paragraph.

3.12.4 Add a new paragraph 3.7.7 as follows:

“3.7.7 Notwithstanding paragraph 3.7.5, the Owner may assign to the Contractor, and the Contractor agrees to accept, the assignment of any contract procured by the Owner for Work or services

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

or Products required on the Project that has been pre-tendered or pre-negotiated by the Owner.”

SC3.13 GC 3.8 LABOUR AND PRODUCTS

3.13.1 Amend paragraph 3.8.1 by adding the following sentence to the end of that paragraph:

“The Contractor represents and warrants that the Products provided in accordance with the Contract Documents are not subject to any conditional sales contracts and are not subject to any security rights claimed or obtained by any third party which may subject any of the Products to seizure and/or removal from the Place of the Work.”

3.13.2 Delete paragraph 3.8.2 and replace it with the following:

“3.8.2 Products provided shall be new and shall conform to all current applicable specifications of the Canadian Standards Association, Canadian Standards Board or General Standards Board, ASTM, National Building Code, Ontario Building Code and all governmental authorities having jurisdiction at the Place of the Work, unless otherwise specified. Products which are not specified shall be of a quality consistent with those specified and their use acceptable to the Consultant. Products brought on to the Place of the Work by the Contractor shall be deemed to be the property of the Owner, but the Owner shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever, and such Products shall be brought to the Place of the Work at the sole risk of the Contractor”

3.13.3 Amend paragraph 3.8.3 by adding the words “, agents, Subcontractors and Suppliers” after the word “employees” toward the end of the first line.

3.13.4 Add new paragraphs 3.8.4 to 3.8.7 as follows:

“3.8.4 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.

3.8.5 The Contractor shall cooperate with the Owner and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the Work, including cooperation to attempt to avoid work stoppages, trade union jurisdictional disputes, and other Labour Disputes. The Contractor shall not, and shall ensure that its Subcontractors and Suppliers do not, employ any persons on the Project whose labour affiliation, or lack thereof, is incompatible with other labour employed in connection with the Work. Any costs arising from Labour Disputes as a result of the employment of any such person by the Contractor, its Subcontractors or Suppliers, shall be the sole expense of the Contractor.

3.8.6 Without in any way limiting the Contractor’s obligations under this Contract, the Contractor shall prepare and implement job site rules more particularly described in the Contract Documents. If no job site rules are described in the Contract Documents, the Contractor shall draft job site rules for the review and approval of the Owner. Such job site rules shall be consistent with the Contractor’s duties and obligations under the OHSA, and shall include provisions making smoking and the consumption of alcohol or non-prescription drugs on the Project the subject of discipline proceedings and/or termination of employment.

3.8.7 The Owner, acting reasonably, shall have the right to order the Contractor to remove from the Project, without cost to the Owner, any representative or employee of the Contractor or any representative or employee of any Subcontractor or Supplier who, in the opinion of the Owner, is a detriment to the Project. In addition, where the Work is being carried out at or near an existing school during the school year, the Contractor shall, upon the Owner’s request, provide to the Owner criminal background checks on all of the Contractor’s employees who will be providing work or services at the Place of the Work, and the Contractor shall require its Subcontractors and Suppliers to provide criminal background checks on any of their employees who will be providing work or services at the Place of the Work. Where such

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

background checks indicate that an employee of the Contractor or any Subcontractor or Supplier has a criminal record, the Owner shall be entitled to cause the removal of that person from the Project.”

SC3.14 GC 3.9 DOCUMENTS AT THE SITE

3.14.1 Delete paragraph 3.9.1 and replace it with the following:

“3.9.1 The Contractor shall keep one copy of the current Contract Documents, As-Built Drawings, Supplemental Instructions, contemplated change orders, Change Orders, Change Directives, cash allowance disbursement authorizations, reviewed Shop Drawings, Submittals, reports and records of meetings at the Place of the Work, in good order and available to the Owner and Consultant.”

SC3.15 GC 3.10 SHOP DRAWINGS

3.15.1 Delete paragraph 3.10.3 in its entirety and replace it with the following:

“3.10.3 The Contractor shall prepare a Shop Drawing schedule acceptable to the Owner and the Consultant prior to the first application for payment. A draft of the proposed Shop Drawing schedule shall be submitted by the Contractor to the Consultant and the Owner for approval. The draft Shop Drawing schedule shall clearly indicate the phasing of Shop Drawing submissions.”

3.15.2 Add new paragraphs 3.10.13 to 3.10.16 as follows:

- “3.10.13 Reviewed Shop Drawings shall not authorize a change in the Contract Price and/or the Contract Time.
- 3.10.14 The Contractor shall not use the term “by others” on Shop Drawings or other submittals, but shall identify the responsible trade, Subcontractor or Supplier where such work is within the scope of the Work.
- 3.10.15 Where Specifications require the Shop Drawings to bear the seal and signature of a professional engineer, such professional engineer shall be registered in the jurisdiction of the Place of the Work and shall have expertise in the area of practice reflected in the Shop Drawings.
- 3.10.16 The Owner's approval of Shop Drawings will be an approval of general detail and arrangement only. The Owner's approval shall not relieve the Contractor from its responsibility for deviations from the Contract Documents, unless the Contractor in writing has notified the Owner of such deviations at the time of submission of the Shop Drawings and the Owner has given written approval to the specific deviations. The Owner's approval also shall not relieve the Contractor from responsibility for defective Work resulting from errors or omissions of any kind on the approved Shop Drawings and shall not constitute authorization to the Contractor to perform additional Work or changed Work. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes, or techniques of construction and installation.”

SC3.16 GC 3.11 USE OF THE WORK

3.16.1 Add new paragraphs 3.11.3 and 3.11.4:

“3.11.3 The Owner or its contractors shall have the right to enter or occupy the Place of the Work, in whole or part, and whether partially or entirely completed, for the purpose of installing, testing or storing fixtures, equipment or machinery before the issuance of a final certificate for payment if such entry and occupancy does not materially interfere with the Contractor in the performance and completion of this Contract within the Contract Time. Such entry or occupancy shall not be considered as acceptance of the Work, in whole or in part, nor shall it relieve the Contractor of its responsibility to complete the Contract.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 3.11.4 The Owner reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the Project, even though Substantial Performance of the Work may not have been attained, provided that such taking of possession and use will not interfere, in any material way, with the progress of the Work. The taking of possession or use of any such portion of the Project shall not be deemed to be the Owner's acknowledgement or acceptance of the Work or the Project, nor shall it relieve the Contractor of any of its obligations under the Contract. In particular, the Contractor's obligations respecting construction health and safety, including all duties of the "constructor" under the OHSA, shall continue to apply notwithstanding such taking of possession and use."

SC3.17 GC 3.13 CLEANUP

- 3.17.1 Amend paragraph 3.13.1 by adding the following to the end of that paragraph:

"The Contractor shall ensure the Place of the Work is cleaned and left in a tidy condition on a daily basis. In the event that the Contractor fails to remove waste and debris as provided in this GC 3.13, then, the Owner or the Consultant may give the Contractor twenty-four (24) hours' written notice to meet its obligations respecting clean up. Should the Contractor fail to meet its obligations pursuant to this GC 3.13 within the twenty-four (24) hour period next following delivery of the notice, the Owner may remove such waste and debris and deduct from payments otherwise due to the Contractor the Owner's costs for such clean up, including a reasonable mark-up for administration."

SC3.18 GC 3.14 STANDARD OF CARE

- 3.18.1 Add new GC 3.14 as follows:

"GC 3.14 STANDARD OF CARE

- 3.14.1 In performing this Contract the Contractor shall exercise a standard of care, skill and diligence that would normally be exercised 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 care, skill and diligence in respect of any Products, Subcontractors, Suppliers, personnel, or procedures which it may recommend to the Owner or employ on the Project.
- 3.14.2 The Contractor represents, covenants and warrants to the Owner that:
- .1 the personnel it assigns to the Project are appropriately experienced;
 - .2 it has a sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the Owner's approval, in the event of death, incapacity, removal or resignation; and
 - .3 there are no pending, threatened or anticipated claims that would have a material effect on the financial ability of the Contractor to perform this Contract.
- 3.14.3 The Contractor shall perform the Work so as to avoid disturbing the occupants of the Place of the Work and any adjacent structures or the public in general, and shall perform the Work in the least intrusive manner possible and shall respect and comply with local regulations and requirements regarding permitted work hours, noise levels and work conditions. The Contractor, without in any way limiting its responsibilities under this Contract, shall take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise, to avoid conditions likely to propagate mould or fungus of any kind, and shall take all other steps reasonably necessary to promote and maintain the safety and comfort of the occupants of the Place of the Work and any adjacent structures and the public in general, and/or to maintain access to and the operation of the same. Without Owner's prior approval, the Contractor shall not permit any personnel, workers or Subcontractors to use any existing facilities including, without limitation, elevators, lavatories, toilets, entrances and parking areas other than those designated by the Owner."

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

SC3.19 GC 3.15 CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS

3.19.1 Add a new GC 3.15 as follows:

"GC 3.15 CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS

3.15.1 Upon receiving the Contractor's written request the Owner may, but is under no obligation to, permit the Contractor to make use of elements of the mechanical and electrical systems or equipment comprising a permanent part of the Work for the purpose of completing the Project. In such event the Contractor shall:

- .1 perform all preventative maintenance services on such systems and equipment as and when specified by the manufacturer;
- .2 prior to applying for the certificate of Substantial Performance of the Work, clean and make good, to the satisfaction of the Consultant, all such systems and equipment;
- .3 pay any and all costs associated with such use, preventative maintenance services, cleaning and making good.

3.15.2 Where the Contractor has made use of elements of the mechanical and electrical systems or equipment comprising a permanent part of the Work, as described in paragraph 3.15.1, the Contractor shall obtain, from the manufacturer or Supplier of the systems or equipment used, a confirmation from such manufacturer or Supplier that the warranty on such systems or equipment begins on the date of Substantial Performance of the Work and is not impaired in scope or reduced in time by virtue of the Contractor's use of such systems or equipment."

SC3.20 GC 4.1 CASH ALLOWANCES

3.20.1 Delete paragraphs 4.1.4 and 4.1.5 and replace them with the following:

"4.1.4 Where the actual cost of the Work under any cash allowance exceeds or is expected to exceed the amount of the allowance, the Contractor shall notify the Owner in writing indicating the amount of additional funds required and, in such case, the Contractor shall not proceed with the cash allowance work until the Contractor receives written instructions from the Owner. Unexpended amounts from other cash allowances may be reallocated at the Consultant's direction to cover the shortfall and, in that case, the Contractor is not entitled to any amount for overhead and profit. Where no such direction is given, or where the actual cost exceeds the allowance even after reallocation of unexpended amounts from other cash allowances, the Contractor shall be compensated for the excess incurred and substantiated, plus an amount for overhead and profit as set out in the Contract Documents, but on the excess only.

4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the Contract Price by Change Order without any adjustment for the Contractor's overhead and profit on such amount."

3.20.2 Add new paragraphs 4.1.8 and 4.1.9 as follows:

"4.1.8 Purchases from cash allowances must be authorized by written instructions issued by the Consultant and the form and methods of accounting for costs shall be agreed to by the Consultant and the Contractor before proceeding with the purchase.

4.1.9 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."

SC3.21 GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

3.21.1 Delete GC 5.1.

SC3.22 GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

3.22.1 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

"No amount claimed shall include Products delivered to the Place of the Work unless the Products are free and clear of all security interests, liens, and other claims of third parties."

- 3.22.2 Amend paragraph 5.2.7 by adding the following to the end of that paragraph:

"Any Products delivered to the Place of the Work but not yet incorporated into the Work shall remain at the risk of the Contractor notwithstanding that title has passed to the Owner pursuant to GC 13.1 – OWNERSHIP OF MATERIALS."

- 3.22.3 Add new paragraphs 5.2.8 and 5.2.9 as follows:

"5.2.8 As a condition of receiving each progress payment the Contractor shall include with each application for payment:

- .1 a CCDC 9 Statutory Declaration attesting to the truth of the statements made therein;
- .2 a current WSIB clearance certificate; and
- .3 in respect of any subcontract whose value exceeds \$100,000, a statutory declaration in form CCDC 9B – 2001."

SC3.23 GC 5.3 PROGRESS PAYMENT

- 3.23.1 Amend paragraph 5.3.1.2 by deleting the words "calendar days" in the first line and replacing them with "Working Days".

- 3.23.2 Delete paragraph 5.3.1.3 and replace it with the following:

"5.3.1.3 the Owner shall make payment to the Contractor on account as provided in Article A-5 of the Agreement – PAYMENT no later than 15 Working Days after the Owner's receipt of a certificate of payment issued by the Consultant."

- 3.23.3 Add new paragraphs 5.3.2 and 5.3.3 as follows:

"5.3.2 If the Contractor fails to provide the necessary supporting documentation with each application for progress payment in accordance with GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, the Owner reserves the right to withhold payment to the Contractor until such time as the supporting documentation is provided.

5.3.3 Payment by the Owner shall not preclude the Owner from thereafter disputing any of the items for which payment was made and shall not be construed as acceptance of any part of the Work."

SC3.24 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

- 3.24.1 Delete paragraph 5.4.3 and replace it with the following:

"5.4.3 Immediately after the issuance of the certificate of Substantial Performance of the Work, the Contractor, in consultation with the Consultant, shall establish reasonable dates for finishing the Work and correcting deficiencies.

5.4.4 Before submitting the written application referred to in paragraph 5.4.1, the Contractor shall submit to the Consultant all:

- .1 guarantees, warranties and certificates;
- .2 testing and balancing reports and spare parts;
- .3 distribution system diagrams and Shop Drawings;
- .4 maintenance and operational manuals, instructions and materials;
- .5 existing reports and correspondence from authorities having jurisdiction,

and other close-out materials or documentation required to be submitted under the Contract, together with written proof acceptable to the Owner and the Consultant that the Work has been performed in conformance with the requirements of municipal, governmental, and utility

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

authorities having jurisdiction at the Place of the Work. The Contractor shall deliver the materials and documentation listed in this paragraph in an electronic format that is readable on the Owner's information technology infrastructure.

- 5.4.5 Within thirty (30) days of the date of Substantial Performance of the Work the Contractor shall deliver to the consultant final As-Built Drawings, failing which the Consultant may assign a reasonable amount to cover the cost the Owner would incur to prepare the As-Built Drawings or, where applicable, an amount specified in the Contract Documents, and retain that amount from any future amount owing to the Contractor, until the final As-Built Drawings are delivered.
- 5.4.6 If the Contractor fails to deliver the documents and materials described in paragraph 5.4.4, then, provided that none of the missing documents and materials interferes with the use and occupancy of the Project in a material way, the failure to deliver shall not be grounds for the Consultant to refuse to certify Substantial Performance of the Work. The Consultant may assign a reasonable amount or, where applicable, an amount specified in the Contract Documents, and retain that amount from the written application for Substantial Performance of the Work, until the required materials are delivered.
- 5.4.7 Should any documents or materials not be delivered in accordance with paragraph 5.4.4 or 5.4.5 by the earlier of: (1) forty-five (45) days following the issuance of the certificate of Substantial Performance of the Work, and (2) the Contractor's application for final payment under paragraph 5.7.1 of GC 5.7 – FINAL PAYMENT, then the amount(s) previously retained pursuant to paragraphs 5.4.5 and/or 5.4.6 shall be forfeited to the Owner as compensation for the damages deemed to have been incurred by the Owner, and not as a penalty, arising from the Contractor's failure to deliver the specified documents or materials, and the Contract Price shall be reduced accordingly."

SC3.25 GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- 3.25.1 Amend paragraph 5.5.2 by adding the following sentence to the end of that paragraph:
- "A reserve fund may be retained by the Owner to secure the correction of deficiencies, the amount of such reserve fund to be based on the Consultant's reasonable estimate of the cost of correcting deficient items."
- 3.25.2 Delete paragraph 5.5.3.
- 3.25.3 Amend paragraph 5.5.4 by deleting the word "first" in the second line of that paragraph and replacing it with the word "fifth".

SC3.26 GC 5.7 FINAL PAYMENT

- 3.26.1 Amend paragraph 5.7.1 by adding the following to the end of that paragraph:
- "The Contractor's application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraphs 5.4.4 and 5.4.5 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK."
- 3.26.2 Amend paragraph 5.7.2 as follows:
- (a) by deleting the words "10 calendar days" in the first line of that paragraph and replacing them with "10 Working Days"; and
 - (b) by adding the following to the end of that paragraph:
- "The application will not be considered valid until Products installed are tested and conform to the requirements specified in the Contract Documents and all documentation required by the Contract Documents including but not limited to the documents and materials listed in paragraphs 5.4.4 and

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

5.4.5 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK have been received and accepted by the Consultant.”

- 3.26.3 Amend paragraph 5.7.4 by deleting the words “5 calendar days after the issuance” and substituting the words “15 Working Days after receipt” in the second line.

SC3.27 GC 5.8 WITHHOLDING OF PAYMENT

- 3.27.1 Add new paragraphs 5.8.2 and 5.8.3 as follows:

- “5.8.2 Notwithstanding any provision in the Contract Documents to the contrary, the Owner may withhold payment on any certificate for payment to the extent required to offset any previous over-payment made to the Contractor, damages or costs incurred by the Owner, or to the extent as may be necessary to protect the Owner from loss or damage as a result of:
- .1 Contractor’s failure to perform any of its material obligations, or where the Contractor is otherwise in default under the Contract Documents and any such default is continuing;
 - .2 defective Work not remedied;
 - .3 damage done by the Contractor to work carried out by other contractors or by Owner’s forces;
 - .4 Contractor’s failure to make prompt payment to its Subcontractors and Suppliers respecting Work for which the Owner has made payment to the Contractor;
 - .5 claims or reasonable evidence indicating possible commencement of claims for which the Contractor may be responsible to indemnify the Owner;
 - .6 there is a reasonable indication that the Work will not be substantially performed in accordance with the Construction Schedule or within the Contract Time;
 - .7 Contractor’s failure to remove liens arising from the Work or otherwise to satisfy its obligations under GC 13.4 – LIENS AND ACTIONS.
- 5.8.3 Where the Owner has withheld payment to the Contractor pursuant to the provisions of this Contract, the Owner shall be entitled to apply the funds withheld toward the cost of any required remedial work, or toward damages or losses suffered and for which the Owner is entitled to compensation under the Contract.”

SC3.28 GC 6.1 OWNER’S RIGHT TO MAKE CHANGES

- 3.28.1 Amend paragraph 6.1.2 by adding the following to the end of that paragraph:

“This requirement is of the essence and it is the express intention of the parties that any claims by the Contractor for a change in the Contract Price, Contract Time and/or the Contract shall be barred unless there has been strict compliance with PART 6 – CHANGES IN THE WORK. No course of conduct or dealing between the parties, no express or implied acceptance of alterations or additions to the Work, and no claims that the Owner has been unjustly enriched by any alteration or addition to the Work, whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional payment under this Contract or a claim for any extension of the Contract Time, or a claim for an amendment to the Contract. Without limiting the generality of the foregoing, under circumstances of expediency, the Contractor may proceed with a change in the Work without first obtaining a Change Order or a Change Directive where it has received from the Owner or the Owner’s authorized representative some form of written or electronic direction agreeing to a change in the Contract Price, the Contract Time or the Contract, in which case such change, and the value of such change, if any, will be determined pursuant to GC 6.2 or GC 6.3, at the option of the Owner.”

- 3.28.2 Add a new paragraph 6.1.3 as follows:

- “6.1.3 The Contractor agrees that changes resulting from construction coordination including but not limited to site surface conditions, site coordination and Subcontractor and Supplier coordination, are included in the Contract Price and shall not entitle the Contractor to claim any increase to the Contract Price in relation to coordination.”

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

SC3.29 GC 6.2 CHANGE ORDER

3.29.1 Amend paragraph 6.2.1 by adding the following sentence to the end of that paragraph:

“Such adjustments and method of adjustment must be submitted by the Contractor to the Consultant in sufficient time to prevent interruption of the orderly process of construction and, in any event, no later than ten (10) days from the Contractor’s receipt of the proposed change in the Work.”

3.29.2 Add new paragraphs 6.2.3 to 6.2.6 as follows:

“6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the Owner:

- .1 by estimate and acceptance of a lump sum. The lump sum shall include overhead, profit and other reasonable charges of the Contractor and shall be the total cost to the Owner;
- .2 by unit prices established in the Contract or subsequently agreed upon. Unit prices shall include overhead, profit, and other reasonable charges of the Contractor and shall be the total cost to the Owner. Adjustment to the Contract Price shall be based on a net quantity difference from the original quantity.
- .3 by the amount, net of all credits, of time, materials and Products expended:
 - (A) by a Subcontractor, applying the labour charge out rates set out in the wage schedule in the Contract Documents together with the actual costs, without mark-up, of materials and Products utilized in the change, plus the Subcontractor’s mark-up disclosed in Column A of the table below which applies to material and Product costs only;
 - (B) by the Contractor, applying the labour charge out rates set out in the wage schedule in the Contract Documents together with the actual costs, without mark-up, of materials and Products utilized in the change, plus the mark-up disclosed in Column B of the table below which applies to material and Product costs only. For greater certainty, the Contractor is not entitled to a mark-up disclosed in Column B of the table below on self-performed additional work.

The Contractor shall also be entitled to the mark-up disclosed in Column B of the table below, on the value of additional work performed by Subcontractors.

Value of Additional Work	Column A Subcontractor Mark-Up on Material and Products only	Column B Contractor Mark-Up on Material and Products Supplied by the Contractor, and on Subcontractor work
\$0 to no more than \$25,000	10%	10%
\$0 to no more than \$50,000	10%	7.5%
\$0 to in excess of \$50,000	5%	5%

Interpretive Note: The mark-ups disclosed in the above table are flat not graduated. For example, a Subcontractor performed change valued at \$35,000 attracts a mark-up of 10% for the Subcontractor (on the cost of material and Products only) and 7.5% for the Contractor. The table is not intended to provide one set of mark-ups for the first \$25,000 of the change and a different set of mark-ups for the balance.

6.2.4 The mark-ups described in paragraph 6.2.3.3 are intended to cover all general expenses and overhead costs incurred by the Contractor in relation to the change. For greater certainty, the following items are covered by and included in the mark-ups: additional bonding and insurance costs, supervision, project management, general account items, small tools, estimating, safety, preparation of record drawings, coordination and administration and

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

warranty costs, and general clean-up and disposal costs necessary to perform the change in the Work.

- 6.2.5 An adjustment to the Contract Time will be considered only when the Contractor demonstrates to the Owner that a change in the Work affects the critical path of the Work. Any costs associated with an adjustment to the Contract Time shall be identified by the Contractor and shall be limited to the reasonable direct costs directly attributable to the adjustment to the Contract Time, excluding the items described in paragraph 6.2.4.
- 6.2.6 The Contractor shall not be entitled to any additional compensation arising out of changes to the Work aside from the amounts determined in accordance with this GC 6.2. In no event shall the Owner be liable to the Contractor for any costs, including indirect, impact or consequential costs, arising out of changes to the Work beyond the agreed upon amount of the Change Order."

SC3.30 GC 6.3 CHANGE DIRECTIVE

3.30.1 Delete paragraph 6.3.3.

3.30.2 Amend paragraph 6.3.7 by inserting the words "Subject to paragraph 6.3.14," at the beginning of that paragraph. Further amend paragraph 6.3.7 as follows:

(a) Delete paragraph 6.3.7.1 and replace it with the following:

"6.3.7.1 salaries, wages and benefits paid to personnel in the direct employ of the Contractor, applying the labour rates set out in the wage schedule in the Contract Documents or as otherwise agreed between the Owner and Contractor for personnel

- (A) carrying out the Work, including necessary supervisory services;
- (B) engaged in the preparation of Shop Drawings, fabrication Drawings, coordination Drawings and As-Built Drawings; or
- (C) including clerical staff engaged in processing changes in the Work."

(b) Delete paragraphs 6.3.7.15 and 6.3.7.17.

3.30.3 Amend paragraph 6.3.12 by adding the following to the beginning of that paragraph:

"An adjustment of the Contract Time will be considered only where the change in the Work affects the critical path of the Work."

3.30.4 Add a new paragraph 6.3.14 as follows:

"6.3.14 Without limitation, the following shall not form part of the cost of performing the work attributable to a Change Directive, and shall not be recoverable by the Contractor:

- .1 head office salaries and benefits and all other overhead or general expenses, except only for the salaries, wages and benefits of personnel described in paragraph 6.3.7.1 and the contributions, assessments or taxes referred to in paragraph 6.3.7.2;
- .2 capital expenses and interest on capital;
- .3 general cleanup, except where the performance of the work attributed to the Change Directive causes specific additional cleanup requirements;
- .4 wages paid for field supervision of Subcontractors;
- .5 wages, salaries, rentals or other expenses that exceed the rates that are standard in the locality of the Place of the Work or that are otherwise deemed unreasonable by the Consultant;
- .6 any costs or expenses attributable to the negligence, improper work, deficiencies, or breaches of contract by the Contractor or any Subcontractor;

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- .7 any costs of quality assurance, such as inspection and testing services, charges levied by authorities having jurisdiction, and any legal fees unless any such costs or fees are pre-approved in writing by the Owner; and
- .8 the costs of the items listed in paragraph 6.2.4.”

SC3.31 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

3.31.1 Add a new paragraph 6.4.0 as follows:

“6.4.0 The Contractor confirms that, before signing the Contract, it carefully investigated and examined the Place of the Work, the Contract Documents and any other documents made available by the Owner, and applied to such investigations and examinations the degree of care, skill and diligence described in paragraph 3.14.1 of GC 3.14 – STANDARD OF CARE. Through such investigations and examinations, the Contractor has satisfied itself as to the conditions, circumstances, limitations and requirements necessary for the Contractor to perform the Work in accordance with the Contract Documents including, but not necessarily limited to, such things as:

- .1 the nature and location of the Work and the Project site, including the availability / restrictions of access to the Project site;
- .2 the character and content of the Work to be done;
- .3 the character and scope of work to be done by other contractors and Owner’s forces;
- .4 the availability of labour, equipment, material, Products and facilities needed for the on-time performance and completion of the Work;
- .5 all labour restrictions, including availability of skilled trades;
- .6 safety hazards and labour contract negotiations which may have an impact on the performance of the Work;
- .7 the location of any required utility service;
- .8 without limiting the generality of the foregoing, any contingency and/or circumstances which may affect the Work.

If the Contractor has not conducted the investigations and examinations described in this paragraph 6.4.0, it is deemed to assume all risk of conditions or circumstances now existing or arising in the course of the Work which could make the Work more expensive or more difficult to perform than was contemplated at the time the Contract was signed. No allowances will be made for additional costs and no claims by the Contractor will be considered for an adjustment in the Contract Price or Contract Time in connection with conditions which were reasonably apparent or which could reasonably have been discovered by such investigations or examinations made before the signing of the Contract.”

3.31.2 Amend paragraphs 6.4.1.1 and 6.4.1.2 by adding the following words to the end of each of those paragraphs:

“and which were concealed from discovery notwithstanding the conduct of the investigations and examinations described in paragraph 6.4.0.”

3.31.3 Amend paragraph 6.4.2 by inserting the words “and were concealed from discovery notwithstanding the conduct of the investigations and examinations described in paragraph 6.4.0” after the word “materially” in the second line.

3.31.4 Delete paragraph 6.4.3 and substitute the following:

“6.4.3 If the Consultant makes a finding pursuant to paragraph 6.4.2 that no change in the Contract Price or Contract Time is justified, the Consultant shall report in writing the reasons for this finding to the Owner and the Contractor.”

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

SC3.32 GC 6.5 DELAYS

- 3.32.1 Amend paragraphs 6.5.1 and 6.5.2 by deleting the last sentence in each paragraph and substituting the following in each case:

“The Contractor shall be reimbursed by the Owner for reasonable direct costs directly flowing from the delay, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity.”

- 3.32.2 Amend paragraph 6.5.3 by adding the following to the end of that paragraph:

“, in which case the Contractor shall be reimbursed by the Owner for reasonable direct costs directly flowing from the delay, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity.”

- 3.32.3 Amend paragraph 6.5.4 by adding the following to the end of that paragraph:

“For greater certainty, it is the intention of the parties that an extension for delay will be considered only when the Contractor demonstrates to the Owner that the delay affects the critical path of the Work. Without in any way limiting the generality of the foregoing, it is a condition precedent to the Contractor’s claim for extension of the Contract Time and for additional compensation that the notice provisions in this paragraph be strictly adhered to in each instance, except where the event of delay itself reasonably precludes strict adherence to such notice provisions. If the Contractor fails to comply with such notice provisions, it shall be deemed to have waived the right to claim for the effects of delay.”

- 3.32.4 Add new paragraphs 6.5.6, 6.5.7, 6.5.8 and 6.5.9 as follows:

“6.5.6 If the Contractor is delayed in the performance of the Work by an act or omission of the Contractor or anyone directly or indirectly employed or engaged by the Contractor, 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 Owner and 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, but not limited to, the cost of all additional services required by the Owner from the Consultant or any subconsultants, project managers, or others employed or engaged by the Owner.

6.5.7 The Contractor shall be responsible for the care, maintenance and protection of the Work in the event of any suspension of construction as a result of the delay described in paragraphs 6.5.1, 6.5.2 or 6.5.3. In the event of such suspension, the Contractor shall be reimbursed by the Owner for the reasonable costs incurred by the Contractor for such care, maintenance and protection, but excluding the costs of the Contractor’s head office personnel. The Contractor’s entitlement to costs pursuant to this paragraph, if any, shall be in addition to amounts, if any, to which the Contractor is entitled pursuant to paragraphs 6.5.1, 6.5.2 or 6.5.3.

6.5.8 Without limiting the obligations of the Contractor described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS and GC 9.4 – CONSTRUCTION SAFETY, the Owner may, by Notice in Writing, direct the Contractor to stop the Work where the Owner determines that there is an imminent risk to the safety of persons or property at the Place of the Work. In the event that the Contractor receives such notice, it shall immediately stop the Work and secure the Project site. The Contractor shall not be entitled to an extension of the Contract Time or to an increase in the Contract Price unless the resulting delay, if any, would entitle the Contractor to an extension of the Contract Time or the reimbursement of the Contractor’s costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3.

6.5.9 If the Contractor is delayed in the performance of the Work by a Labour Dispute, civil disobedience, riot, sabotage, acts of God or any of the events described in paragraphs 6.5.3.1 through 6.5.3.4 for a period of sixty (60) calendar days or longer, the Owner may terminate the Contract by giving Notice in Writing to that effect. In such event, the Owner shall pay for the

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

Work performed up to the effective date of termination, including mobilization and demobilization costs, and for such additional costs, if any, directly flowing from such termination which are a reasonable consequence of the termination, but excluding any consequential, indirect or special damages, and any claims for loss of profit or opportunity. The Owner shall not be liable to the Contractor for any other claims, costs or damages whatsoever arising from such termination of the Contract."

SC3.33 GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

3.33.1 Delete paragraph 7.1.2 and replace it with the following:

"7.1.2 If the Contractor neglects to prosecute the Work properly, or fails or neglects to maintain the latest approved Construction Schedule, or otherwise fails to comply with the requirements of the Contract in a material way, the Owner may, without prejudice to any other right or remedy the Owner may have, give the Contractor Notice in Writing that the Contractor is in default of the Contractor's contractual obligations and instruct the Contractor to correct the default in the 5 Working Days immediately following the receipt of such Notice in Writing, but without affecting in any respect the liability of the Contractor in respect of earlier defaults."

3.33.2 Add a new paragraph 7.1.5A immediately after paragraph 7.1.5 as follows:

"7.1.5A The Owner may terminate the Contract at any time for any or no reason. In such event, the Owner shall pay for the Work performed up to the effective date of termination, including demobilization costs, and for such additional costs, if any, directly flowing from such termination which are a reasonable consequence of the termination, but excluding any consequential, indirect or special damages, and any claims for loss of profit or opportunity. The Owner shall not be liable to the Contractor for any other claims, costs or damages whatsoever arising from such termination of the Contract."

SC3.34 GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

3.34.1 Amend paragraph 7.2.2, in line 1, by deleting "20" and replacing it with "45".

3.34.2 Amend paragraph 7.2.3 as follows:

- (a) Delete paragraph 7.2.3.1;
- (b) Amend paragraph 7.2.3.3 by adding the words ", except where the Owner has a bona fide claim for setoff," after the word "Consultant";
- (c) Amend paragraph 7.2.3.4 by deleting the words ", except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER";
- (d) Add the following at the end:

"The foregoing defaults in contractual obligations shall not apply to the withholding of certificates or payments, or both, in accordance with the Contract Documents."

3.34.3 Delete paragraph 7.2.5 and replace it with the following:

"7.2.5 If the default cannot be corrected within the 5 Working Days specified in paragraph 7.2.4, the Owner shall be deemed to have cured the default if it:

- .1 commences the correction of the default within the specified time, and
- .2 provides the Contractor with an acceptable schedule for such correction, and
- .3 completes the correction in accordance with such schedule.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 7.2.6 If the Contractor terminates the Contract under the conditions described in this GC 7.2, the Contractor shall ensure the Place of the Work is left in a safe and secure condition as required by authorities having jurisdiction and the Contract Documents, and shall be entitled to be paid for all Work performed to the date of termination. Subject to the Contractor's obligation to mitigate costs, the Contractor shall also be entitled to recover the costs directly flowing from and which are a reasonable consequence of the termination, including the costs of demobilization and direct losses sustained on Products and Construction Equipment, but excluding the costs of the Contractor's head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity."

SC3.35 GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 3.35.1 Amend paragraphs 8.2.6, 8.2.7 and 8.2.8, in the first line of each paragraph, by deleting "10" and replacing it with "20" in each case.
- 3.35.2 Add new paragraphs 8.2.9, 8.2.10, 8.2.11, 8.2.12, 8.2.13 and 8.2.14 as follows:
- "8.2.9 Within 10 Working Days of receipt of a Notice in Writing given pursuant to paragraph 8.2.6, the Owner or the Contractor may give the Consultant a Notice in Writing containing:
- .1 a copy of the notice of arbitration;
 - .2 a copy of GC 8.2, as amended by these Supplementary Conditions;
 - .3 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.
- 8.2.10 The Owner and the Contractor agree that, upon giving the Notice in Writing provided in paragraph 8.2.9, the Consultant may elect to become a full party to the arbitration commenced pursuant to paragraph 8.2.6. The Owner and the Contractor acknowledge that, if the Consultant so elects, the Consultant shall be a party to the arbitration within the meaning of the Rules referred to in paragraph 8.2.6 by virtue of the agreement between the Consultant and the Owner.
- 8.2.11 Failure of the Owner or the Contractor to give the Notice in Writing provided in paragraph 8.2.9 shall not prevent either the Owner or the Contractor from commencing or pursuing an application, action, counterclaim or any other proceeding against the Consultant arising out of the issues in dispute in the arbitration between the Owner and the Contractor brought under paragraph 8.2.6.
- 8.2.12 If the Consultant is given the Notice in Writing contemplated by paragraph 8.2.9, the Consultant may participate in the appointment of the arbitrator and, notwithstanding the Rules referred to in paragraph 8.2.6, the time period for reaching agreement on the appointment of the arbitrator shall begin to run from the date on which the Consultant receives the notice described in paragraph 8.2.9.
- 8.2.13 The arbitrator in an arbitration in which the Consultant is a party may:
- .1 determine whether any notice given pursuant to paragraph 8.2.9 is, in substance, sufficient, the notice requirements being interpreted liberally; and,
 - .2 make any procedural order considered necessary to facilitate the participation of the Consultant as a party to the arbitration.
- 8.2.14 The provisions of paragraph 8.2.9 shall apply mutatis mutandis to written notice to be given by the Consultant to any subconsultant, except that the subconsultant is not entitled to any election as outlined in paragraph 8.2.10 and is deemed to be bound by the arbitration proceeding."

SC3.36 GC 9.1 PROTECTION OF WORK AND PROPERTY

- 3.36.1 Amend paragraph 9.1.1.1 by adding the following to the end of that paragraph:

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

“, which the Contractor could not reasonably have discovered applying the degree of care and skill described in paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW.”

- 3.36.2 Delete paragraph 9.1.2 in its entirety and replace it with the following:

“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 the degree of care and skill described in GC 3.14 – STANDARD OF CARE.”

- 3.36.3 Add a new paragraph 9.1.5 as follows:

“9.1.5 Without in any way limiting the Contractor’s obligations under this GC 9.1, should the Contractor or any Subcontractor or Supplier cause loss or damage to property, including roads, buildings, structures, paving, grass, sod, trees or other plantings, whether owned by the Owner or others, and whether at the Place of the Work or adjoining it, the Contractor shall be liable for the cost of making good such damage and for the replacement cost of the grass, sod, trees or other plantings damaged, including the cost of any arborist or other consultant, and such costs may be deducted by the Owner from amounts otherwise owing to the Contractor.”

SC3.37 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 3.37.1 Amend paragraph 9.2.6 by inserting the following after the word “responsible” in line 2 of that paragraph:

“or whether any toxic or hazardous substances 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,”

- 3.37.2 Amend paragraph 9.2.7.3 by inserting the following words after the word “delay” in the second line of that paragraph:

“, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity”

- 3.37.3 Delete paragraph 9.2.7.4.

- 3.37.4 Amend paragraph 9.2.8 by inserting the following after the word “responsible” in line 2 of that paragraph:

“or that any toxic or hazardous substances 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,”

- 3.37.5 Add a new paragraphs 9.2.10 and 9.2.11 as follows:

“9.2.10 Without limiting its other obligations under this GC 9.2, the Contractor acknowledges that its obligations under the Contract include compliance with the Environmental Programs. The Contractor acknowledges that the Owner may suffer loss and damage should the Contractor fail to comply with the Environmental Programs and agrees to indemnify and hold harmless the Owner with respect to any loss or damage to which the Owner is exposed by the Contractor’s failure to comply. The Contractor acknowledges that should it fail to comply with the Environmental Programs, such failure will constitute a failure to comply with the Contract to a substantial degree within the meaning of paragraph 7.1.2 of GC 7.1 – OWNER’S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR’S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 9.2.11 The Contractor shall indemnify the Owner and the officers, directors, employees and agents of the Owner in respect of any loss, costs or expense or any fine which might be imposed in respect of any failure by the Contractor to satisfy its obligations under this GC 9.2 and, without limiting the general nature of this indemnity, the Contractor shall indemnify the Owner, its officers, directors, employees and agents if the Project is made subject to an order from a court or government agency requiring remediation of any contamination caused as a result of the Work performed by the Contractor or its Subcontractors.”

SC3.38 GC 9.4 CONSTRUCTION SAFETY

- 3.38.1 Amend paragraph 9.4.1 by deleting the first line of that paragraph and replacing it with the following: “The Contractor”.
- 3.38.2 Add new paragraphs 9.4.2 to 9.4.5 as follows:
- “9.4.2 Without limiting the generality of paragraph 9.4.1, the Contractor shall be and shall assume all of the responsibilities of the “constructor” under the OHSA and shall file the “Notice of Project” as “constructor” with the appropriate Ministry.
- 9.4.3 The Contractor represents and warrants to the Owner that appropriate health and construction safety instruction and training have been provided and will be provided to the Contractor’s employees, Subcontractors, Suppliers and all others attending at the Place of the Work. The Contractor also undertakes to provide such health and construction safety instruction and training to the Owner’s representatives, the Owner’s own forces, and other contractors. No comments, suggestions or instructions from the Owner or the Consultant are to be relied upon or assumed to reduce or replace the Contractor’s designation as the “constructor” under the OHSA or its responsibility for construction safety on the Project.
- 9.4.4 The Contractor shall indemnify and save harmless the Owner and its agents, officers, directors, employees, consultants, successors and assigns from and against any and all liability, costs, expenses, fines, damages and all other consequences arising from any and all safety infractions on the Project, including the payment of legal fees and disbursements on a full indemnity basis.
- 9.4.5 The Contractor shall ensure that every “controlled Product” used at the Project site shall meet the labelling requirements and shall have an updated corresponding “Material Safety Data Sheet”, all as required by the WHMIS legislation. The Contractor shall ensure that all Material Safety Data Sheets are and are made available for review at the Project site.”

SC3.39 GC 9.5 MOULD

- 3.39.1 Amend paragraph 9.5.3.3 by inserting the following words after the word “delay,” in line 3 of that paragraph:
- “, but excluding the costs of the Contractor’s head office personnel and overhead costs, and excluding any consequential, indirect or special damages, and excluding any claims for loss of profit or opportunity,”

SC3.40 GC 10.1 TAXES AND DUTIES

- 3.40.1 Amend paragraph 10.1.2 by adding the words “, without any mark-up” to the end of that paragraph.
- 3.40.2 Add new paragraphs 10.1.3, 10.1.4, 10.1.5 and 10.1.6 as follows:
- “10.1.3 Where the Owner is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or Value Added Taxes applicable to the Contract, the Contractor shall, at the request of the Owner or the Owner’s representative, assist with application for any exemption, recovery or refund of such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit of the Owner. The Contractor agrees to endorse over to the Owner any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 10.1.4 The Contractor shall maintain accurate records of equipment, material and component costs reflecting the taxes, customs duties, excise taxes and Value Added Taxes paid.
- 10.1.5 Any refund of taxes including, without limitation, any government sales tax, customs duty, excise tax or Value Added Tax, whether or not paid, which is found to be inapplicable or for which exemption may be obtained, is the sole and exclusive property of the Owner. The Contractor agrees to cooperate with the Owner and to obtain from all Subcontractors and Suppliers cooperation with the Owner in the application for any refund of any taxes, which cooperation shall include, but not be limited to, making or concurring in the making of an application for any such refund or exemption and providing to the Owner copies, or where required, originals of records, invoices, purchase orders and other documentation necessary to support such applications or exemptions or refunds. All such refunds shall either be paid to the Owner, or shall be a credit to the Owner against the Contract Price, in the Owner's discretion.
- 10.1.6 Customs duties penalties, or any other penalty, fine or assessment levied against the Contractor shall not be treated as a tax or customs duty for purposes of this GC 10.1."

SC3.41 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 3.41.1 Amend paragraph 10.2.5 by adding the words: "Subject to paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW" to the beginning of that paragraph.
- 3.41.2 Amend paragraph 10.2.6 as follows:
- (a) delete the words "performs work knowing it to be" in the second line and substitute "performs work when it knew or ought to have known that such work is"; and
 - (b) delete the words "bear the" in the third line and substitute "indemnify and save the Owner harmless against any"
 - (c) add the following sentence to the end of that paragraph:
"In the event the Owner suffers loss or damage as a result of the Contractor's failure to comply with paragraph 10.2.5, and notwithstanding any limitations described in paragraph 12.1.1 of GC 12.1 – INDEMNIFICATION, the Contractor agrees to indemnify and to hold harmless the Owner and the Consultant from and against all claims, demands, losses, costs, damages, actions, suits or proceedings resulting from such failure by the Contractor."

SC3.42 GC 10.4 WORKERS' COMPENSATION

- 3.42.1 Amend paragraph 10.4.1 by inserting the words "with each application for any progress payment, and" after the word "Work," in the first line of paragraph 10.4.1.

SC3.43 GC 11.1 INSURANCE

The Contractor shall provide, maintain and pay for insurance. The contractor shall supply a Certificate of Insurance confirming insurance that will indemnify the Owner for loss of use of the property and property damage with limits not less than: \$5,000,000.00.

- 3.43.1 Amend paragraph 11.1.1.1 by adding the following sentence to the end of that paragraph:
"To the extent not already described in this paragraph, the Contractor shall provide legal liability coverage for compensatory damages because of bodily injury or property damage to third parties arising from all operations of the insured, including premises and operations, Subcontractors' contingent liability, personal injury resulting from protection of persons / property, contractual liability (blanket), broad form property damage, employees as named insureds, cross liability clause and voluntary medical payments."
- 3.43.2 Add a new paragraph 11.1.1.4A immediately after paragraph 11.1.1.4 as follows:

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

“11.1.1.4A In addition to the coverage’s described in CCDC 41, include:

- all risks of direct physical loss including flood;
- full replacement value, as basis for settlement;
- the following deductibles: for flood at \$50,000 and other at \$50,000.”

3.43.3 Amend paragraph 11.1.2 by adding the following to the end of that paragraph:

“11.1.2 The Owner’s acceptance of the Contractor’s delivery of any document evidencing the required policies of insurance does not constitute approval or agreement by the Owner that the insurance requirements have been met or that the insurance policies are in compliance with the requirements of this Contract. Failure of the Owner to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor’s obligation to maintain the insurance policies required by this Contract.”

3.43.4 Add new paragraphs 11.1.9 to 11.1.13 as follows:

- “11.1.9 All occurrences and claims shall be reported immediately in writing to the Owner providing at least the following particulars:
- .1 date, time and location of occurrence;
 - .2 cause and description of circumstances;
 - .3 estimate of loss or damage;
 - .4 names and telephone numbers of persons to contact.
- 11.1.10 Except for policies of automobile insurance, all insurance policies in any way related to the Work and secured and maintained by the Contractor shall include clauses stating each underwriter will waive all rights of recovery, under subrogation or otherwise, against the Owner and the Consultant (except in the event of design related acts errors and omissions).
- 11.1.11 All insurance policies and coverage required of the Contractor will be primary over any other insurance that might be carried by the Owner.
- 11.1.12 By requiring insurance, the Owner does not represent that coverage and limits will necessarily be adequate to protect the Contractor. The insurance effected or procured by the Contractor will not reduce or limit the Contractor’s contractual obligation to indemnify and defend the Owner for claims or suits which result from or are connected with the performance of this Contract.
- 11.1.13 Except for policies of automobile insurance, all insurance policies in any way related to the Work and secured and maintained by the Contractor shall include clauses stating each insurer will waive all rights of recovery, under subrogation or otherwise, against the Owner.”

SC3.44 GC 11.2 CONTRACT SECURITY

3.44.1 Delete paragraphs 11.2.1 and 11.2.2 and replace them with the following:

- “11.2.1 The Contractor shall furnish a labour and material payment bond in favour of the Owner, securing payment by the Contractor of all labour and materials to be supplied pursuant to the Contract, in a form satisfactory to the Owner and issued by such surety company as the Owner may approve. The bond shall be for fifty per cent (50%) of the Contract Price.
- 11.2.2 The Contractor shall furnish a performance bond in favour of the Owner, securing the performance by the Contractor of its obligations under the Contract, including the payment obligations arising thereunder, in a form satisfactory to the Owner and issued by such surety company as the Owner may approve. The bond shall be for fifty per cent (50%) of the Contract Price.
- 11.2.3 It is the intention of the Contract that the performance bond shall be applicable to all of the Contractor’s obligations under this Contract and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

The Contractor represents and warrants that it has provided its surety with a copy of the Contract prior to the issuance of such performance bond.

11.2.4 All premiums and related charges for all bonds shall be included in the Contract Price."

SC3.45 GC 12.1 INDEMNIFICATION

3.45.1 Delete paragraphs 12.1.1 through 12.1.5 and replace them with the following:

- "12.1.1 The Contractor shall defend, indemnify and hold harmless the Owner, its agents, employees, trustees, officers, directors and assigns from and against all claims, demands, damages, losses, expenses, costs including legal fees, actions, suits or proceedings (collectively "Claims") by whomsoever made, brought or prosecuted in any manner, arising out of, resulting from or attributable, directly or indirectly, to the Contractor's or any Subcontractor's performance or non-performance of the Contract, including Claims arising out of the condition of the Work, the Project site, adjoining land, driveways, streets or alleys used in connection with the performance of the Work, regardless of whether or not caused in part by a party indemnified hereunder. It is expressly understood that the Contractor will save harmless the Owner from all Claims made by any party other than the Contractor itself, financial or otherwise, relating to labour and materials furnished by the Contractor or by others for the Work.
- 12.1.2 The Owner shall indemnify and hold harmless the Contractor, its agents and employees from and against Claims arising out of the Contractor's performance of the Contract which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the Place of the Work.
- 12.1.3 Notwithstanding the provisions of paragraph 1.1.7 of GC 1.1 – CONTRACT DOCUMENTS, the provisions of GC 12.1 shall govern over the provisions of paragraph 1.3.1 of GC 1.3 – RIGHTS AND REMEDIES."

SC3.46 GC 12.2 WAIVER OF CLAIMS

3.46.1 Delete paragraphs 12.2.1 through 12.2.10 and replace them with the following:

- "12.2.1 As of the date on which the Owner makes final payment to the Contractor, the Owner expressly waives and releases the Contractor from all claims against the Contractor including without limitation those that might arise from negligence or breach of contract by the Contractor except for one or more of the following:
- .1 those made in writing prior to the date of the final certificate for payment and still unsettled;
 - .2 those arising from the provisions of GC12.1 – INDEMNIFICATION or GC12.3 – WARRANTY;
 - .3 those arising from GC9.2 – TOXIC AND HAZARDOUS SUBSTANCES and arising from the Contractor bringing or introducing any toxic or hazardous substances to the Place of the Work after the Contractor commences the Work;
 - .4 those made by Notice in Writing within a period of six years from the date of Substantial Performance of the Work as set out in the certificate of substantial performance, or within such shorter period as may be prescribed in any limitation statute of the province or territory of the Place of the Work and arising from any liability of the Contractor for damages resulting from the Contractor's performance of the Contract or substantial defects or deficiencies in the Work for which the Contractor is proven responsible. As used herein, "substantial defects or deficiencies" means those defects or deficiencies in the Work where the reasonable cost of repair of such defects or deficiencies, either individually or in the aggregate, exceeds:
 - (A) if the Contract Price is \$2,000,000 or less, the sum of \$50,000, before Value Added Taxes;

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- (B) if the Contract Price exceeds \$2,000,000, the sum of \$100,000, before Value Added Taxes.

12.2.2 As of the date of Substantial Performance of the Work, the Contractor expressly waives and releases the Owner from all claims which it has or reasonably ought to have knowledge of that could be advanced against the Owner including without limitation those that might arise from the negligence or breach of contract by the Owner except:

- .1 those for which Notice in Writing was given prior to the Contractor's application for Substantial Performance of the Work and still unsettled; and
- .2 claims for payment for Work completed after the Contractor's application for Substantial Performance of the Work."

SC3.47 GC 12.3 WARRANTY

3.47.1 Amend paragraph 12.3.1 by adding the following to the end of that paragraph:

"Notwithstanding the foregoing, if an item of Work is not completed at Substantial Performance of the Work, except for extended warranties as described in paragraph 12.3.6, the warranty period for such item of Work shall be one year from the date that such item of Work has been completed and accepted in writing by the Owner."

3.47.2 Amend paragraph 12.3.2 as follows:

- (a) by inserting the words, "Subject to paragraph 3.4.1 of GC 3.4 – DOCUMENT REVIEW" at the beginning of that paragraph; and
- (b) by adding the following to the end of that paragraph:

"If the Contractor has been permitted to make use of permanent equipment or systems, as provided in GC 3.15 – CONTRACTOR'S USE OF PERMANENT EQUIPMENT OR SYSTEMS, such permanent equipment or systems shall be subject to the same warranty as described in this GC 12.3 and shall be judged, for purposes of assessing compliance with the warranty, as though the equipment or system was new, clean and unused by the Contractor, except for normal commissioning and startup activities, prior to the date of Substantial Performance of the Work."

3.47.3 Add the following to the end of paragraph 12.3.4:

"The Contractor shall perform all remedial and warranty work at its own cost and expense and at a time convenient to the Owner, which may be outside of normal working hours. The Owner shall provide reasonable access to those portions of the Project necessary to perform such work, subject to the Owner's operational requirements. Prior to performing the remedial and warranty work, the Contractor shall provide, for the Owner's review and approval, a proposed schedule for the performance of such work."

3.47.4 Add a new paragraph 12.3.7 as follows:

"12.3.7 The Contractor shall assign to the Owner all warranties, guarantees or other obligations for Work, services or Products performed or supplied by any Subcontractor, Supplier or other person in connection with the Work, and such assignment shall be with the consent of the assigning party where required by law or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the Owner under the Contract Documents."

SC3.48 PART 13 – OTHER PROVISIONS

3.48.1 Add new "PART 13 – OTHER PROVISIONS" as follows:

"PART 13 OTHER PROVISIONS

GC 13.1 CONTRACTOR LIABILITY FOR DAMAGES

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

- 13.1.1 Notwithstanding any other provision in this Contract, if the Owner, as a result of the Contractor's act or omission or breach of contract, incurs damages, costs, fees or expenses, including costs of additional services performed by the Consultant or any subconsultants and including the Owner's reasonable solicitor and own client costs, whether or not such act, omission or breach results in any lien, lien action or other legal proceeding, and whether or not such act, omission or breach results in the Owner taking any of the steps provided for in GC 7.1, all such damages, costs, fees and expenses shall be charged to the Contractor and the Owner shall be entitled to set off and deduct all such damages, costs, fees and expenses from any amount owing to the Contractor and any security or other funds held by the Owner. If there is no amount owing by the Owner to the Contractor at that time, then the Contractor shall reimburse the Owner for all of the said damages, costs, fees and expenses.

GC 13.2 OWNERSHIP OF MATERIALS

- 13.2.1 Unless otherwise specified, all materials existing at the Place of the Work at the time of execution of the Contract shall remain the property of the Owner. All Work and Products delivered to the Place of the Work by the Contractor shall be the property of the Owner, and shall be free of any encumbrances. The Contractor shall remove all surplus or rejected materials when notified to do so by the Consultant.

GC 13.3 DAILY REPORTS / DAILY LOGS

- 13.3.1 The Contractor shall cause its supervisor, or another competent person, to prepare a daily log or diary reporting on weather conditions, workforce of the Contractor, Subcontractors, Suppliers and any other forces on site and also record the general nature of Project activities. Such log or diary shall also include any extraordinary or emergency events which may occur and also the identities of any persons who visit the site who are not part of the day-to-day workforce.
- 13.3.2 The Contractor shall also maintain records, either at its head office or at the Project site, recording manpower and material resourcing on the Project, including records which document the activities of the Contractor both as planned and actual.
- 13.3.3 Upon request by the Owner or the Consultant, the Contractor shall make available for inspection and copying all of the records generated pursuant to this GC 13.3, along with any other routine Project records ordinarily maintained by the Contractor.

GC 13.4 LIENS AND ACTIONS

- 13.4.1 The Contractor shall save and keep the Owner and the Place of the Work free from all construction liens and all other liens whatsoever arising out of the Work. If any lien is claimed, filed or registered or any written notice of lien is received by reason of labour, services, equipment, materials or any Work supplied or claimed to have been supplied by or through a Subcontractor or Supplier, the Contractor shall, at its own expense, within ten (10) Working Days of being notified of the lien or written notice of lien, secure the discharge, release, vacating or withdrawal of such lien or written notice of lien by payment or by giving security or in such other manner as is or may be required or permitted by law, failing which the Owner may, but shall not be required, take such steps as it, in its absolute discretion, may deem necessary to release, vacate or discharge the lien or written notice of lien.
- 13.4.2 If a lien action or any other action or legal proceeding arising out of the Project is commenced, the Contractor shall take all reasonable steps to remove the Owner from such action or legal proceeding, and shall indemnify the Owner and hold it harmless in such action or legal proceeding.
- 13.4.3 All amounts, including solicitor and own client costs, disbursements, interest, borrowing and premium or other bonding costs and/or charges incurred by the Owner in releasing, vacating, discharging or otherwise dealing with a lien, written notice of lien and/or defending or otherwise dealing with an action or legal proceeding, shall be charged to the Contractor and shall be set off and deducted from any amount owing to the Contractor. If there is no amount owing by the Owner to the Contractor at that time, then the Contractor shall reimburse the Owner for all of the said costs and associated expenses.

SUPPLEMENTARY CONDITIONS AMENDMENTS TO CCDC 2 – 2008 STIPULATED PRICE CONTRACT

GC 13.5 ADVERTISING AND PUBLIC STATEMENTS

- 13.5.1 The Contractor shall not publish, issue or make any statements or news release, electronic or otherwise, concerning the Contract, the Work, or the Project, and shall not use the Owner's name or logo without the prior express written consent of the Owner. For greater certainty, the Contractor shall obtain the prior written approval of the Owner for any public advertising, written public sales promotions, press release or other general publicity matter, in which the name or logo of the Owner is mentioned or used, or in which words are used from which any connection with the Owner may be inferred. The Contractor will not erect or permit the erection of any sign or advertising without the prior written approval of the Owner.

GC 13.6 AMENDMENTS TO THE CONTRACT

- 13.6.1 No alteration or amendment to this Contract, no course of conduct or dealing between the parties, and no express or implied acceptance of alterations or amendments to the Contract shall be binding unless it is in writing and signed by each party.
- 13.6.2 No waiver by or on behalf of a party of any breach of a provision of this Contract shall be binding upon the party unless it is expressed in writing and duly executed by the party or signed by its fully authorized representatives, and such a waiver shall not operate as a waiver of any future breach, whether of a like or different character. No waiver shall be inferred from or implied by the conduct of any party."

END OF SUPPLEMENTARY CONDITIONS

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 Section 00100 INSTRUCTIONS TO BIDDERS,
 - .2 The General Conditions of the Contract CCDC 2,
 - .3 Section 00810, Supplementary Conditions CCDC 2,
 - .4 The Sections of Division 01.
- .2 These general requirements shall apply to every section of the work contained in these specifications, and shall apply to all contracts within this tender.
- .3 All tenders, quotes and proposals are subject to the Municipal Freedom of Information and Protection of Privacy Act and will be disclosed where the Board is required to do so for the purposes of complying with an Order of the Information and Privacy Commissioner.

1.2. CODES AND BYLAWS

- .1 2017 Ontario Building Code (Ont. Reg. 332/12 as amended by O. Reg. 563/17) and By-laws of Municipality shall govern this work. Most stringent requirements indicated by above shall govern.
- .2 Where the by-law, code or official standard is quoted, it shall mean latest edition including all revisions or amendments in effect at time of submission of tenders.

1.3. SUPERINTENDENCE

- .1 Provide full time superintendent staff at the place of the Work during execution of each part of the Work.
- .2 Provide qualified superintendent staff with minimum 5 years documented experience in projects of comparable type and complexity. The supervisory staff assigned to the Project shall also be fully competent to implement efficiently all requirements for scheduling, coordination, field engineering, reviews, inspections and submittals defined in the Specifications.
- .3 Superintendent assigned to the Project shall be "Gold Seal Certified" as per Canadian Construction Association; or a superintendent that can demonstrate the requisite experience and success relevant to this Project to the sole satisfaction of the Owner.

PART 2: EXECUTION

2.1. SECURITY

- .1 Ensure that all construction areas are secured at all times and locked when no construction personnel are in attendance. Restrict access in construction areas to construction personnel only. Lock up construction tools when not in use.

2.2. SITE DIMENSIONS

- .1 Before proceeding with shop drawings, fabrication, or supply of each new part of the Work, examine installed parts of the Work and verify as-built site dimensions to coordinate previously built construction with pending construction.

2.3. SIGNS, ADVERTISING AND PUBLICATIONS

- .1 Do not erect or display devices, signs or advertisements of labour, materials or services provided to the Work unless authorized to do so, in writing, by the Owner. Signs relative to fire, danger and safety are exempted from this requirement.
- .2 Do not consent to advertising of the Work, of any kind, without the Owner's and the Consultant's written acceptance. Do not consent to mention of the Work in any advertising or articles in any publication relating to the Work without the acceptance of the copy and written permission from the Owner and the Consultant.

2.4. PARKING AND STORAGE

- .1 Parking is available to the contractor on site.

- .2 An area for storage is available for contractor storage on the south side of the building on the existing light duty asphalt.
 - .1 Fencing and security of construction materials and equipment is the responsibility of the Contractor.
 - .2 The area is to be reinstated by the Contractor upon completion of the contract.
- .3 Adjacent Municipal property / roadways are not to be used for construction materials storage.
- .4 Confine storage of materials and Contractors office to areas on Owner's property within the hoarded area and as indicated on the drawings.
- 2.5. PROCEDURE AND SUPPLY OF CRITICAL MATERIALS**
 - .1 Supply products in ample time to be installed into the Work together with templates, measurements and other information required for placement.
- 2.6. RESTRICTIONS**
 - .1 Restrict non-construction personnel from the construction site, except for Contractor-authorized visitors.
- 2.7. DAILY CONSTRUCTION CLEANING**
 - .1 At all times when the school is occupied by staff and/or students, the Contractor is to take extra care in the daily cleanup of the site to ensure any possible hazards have been removed.
 - .2 **Clean and tidy the Work areas daily.** Keep dust and dirt to a level acceptable to the Owner.
 - .3 Remove rubbish and surplus materials promptly and dispose of in a legal manner. Do not allow scrap piles to accumulate.
 - .4 Provide garbage bins for the disposal and removal of garbage.
 - .5 Provide complete cleaning of each area of the building as construction activities are completed.
- 2.8. PERMITS**
 - .1 The Owner will obtain and pay for the building permit.
 - .2 The contractor is responsible for notifying the authorities having jurisdiction for reviews throughout the project.
 - .3 The contractor is responsible for obtaining all other permits.
- 2.9. SAFETY**
 - .1 Conform to and enforce strict compliance with Occupational Health & Safety Act, latest revised edition, including amendment call "Workplace Hazardous Materials Information Systems (WHMIS)" and including amendment called Bill 208 requiring creation of health and safety representatives/committee.
 - .2 The Contractor shall observe all health and safety requirements including the following procedures, methods and responsibilities:
 - .1 The Contractor will take all necessary steps to protect personnel (workers, visitors, general public, etc.) and property from any harm during the course of the contract.
 - .2 All work procedures will be in accordance with Board and legislated standards.
 - .3 All equipment shall be in safe operating condition and appropriate to the task.
 - .4 The Contractor shall ensure that only competent personnel are permitted to work on site. The Owner will throughout the term of the contract also remove from the site any persons not observing or complying with safety requirements.
 - .5 The Contractor shall provide competent personnel to implement their safety program and ensure that the Owner's standards and those of the Ontario Health and Safety Act are being complied with.
 - .6 The Consultant will monitor every week to ensure that safety requirements are met and that safety records are properly kept and maintained. Continued disregard for safety standards can cause the contract to be cancelled and the Contractor or subcontractors removed from the site.

- .7 The Contractor will report to the Owner, Consultant and jurisdictional authorities any accident or incident involving Contractor, Board or public personnel and/or property arising from the Contractor's execution of the work.
- .8 The Contractor shall ensure that every "controlled product" used at the work site shall meet the labelling requirements and have an updated corresponding material safety data sheet as per the Workplace Hazardous Materials Information System legislation. The Contractor shall ensure that all the material safety data sheets are available at the work site.
- .9 Designated Substances and Asbestos:
 - .1 Do not use or cause to be placed, either temporarily during construction or permanently as part of any construction assembly, a material or piece of equipment that has any form of asbestos content. No exceptions to this rule will be permitted.
 - .2 If the Contractor locates asbestos containing materials or a designated substance during the project then the Contractor shall cease work and seal the area and immediately contact the Consultant and School Board personnel.
 - .3 The Board shall arrange to remove the asbestos or designated material.
 - .4 The Contractor shall comply with all regulations relating to asbestos. The removal and disposal of asbestos shall be in accordance with the Ministry of Environment and Energy Regulation 347 and Ontario Ministry of Labour Occupational and Safety Act 838.

2.10. SPECIAL PROJECT CONSIDERATIONS

- .1 Owner's Continued Use of Building & Site:
 - .1 Functions in the existing school must continue uninterrupted during school hours of operation.
 - .2 Where any work is to occur during the school year comply with the following requirements:
 - .1 The Contractor must plan, schedule and provide for safe exiting of students, staff and members of the public from all areas of the existing building and any areas of new construction which are to be occupied during the course of the work. Any work which would impede the safe access from occupied areas must be scheduled and completed during those periods of time that the building is unoccupied. The Contractor must provide any temporary hoarding and construction necessary to protect or provide access to exits and exits affected by the work during the course of construction. All scheduling, temporary provisions etc. must be reviewed by and adjusted as required to meet the approval of the Owner and Authorities having jurisdiction.
 - .2 Contractor shall ensure that mechanical / electrical services, sprinkler and alarm systems, P/A system, parking/delivery systems, etc. necessary for Owner's safe occupancy and continued functions are properly maintained and operating. The Contractor shall be responsible for the cost of any temporary arrangements necessary due to construction, and whether through accident or planning, required to maintain this functionality including any necessary interim or temporary commissioning or verification. During the school year, interruption of existing services will only be permitted outside of school's normal operating hours of 6:00 am to 4:00 pm.
 - .3 Contractor forces shall ensure that work is advanced with minimum disruption and inconvenience to Owner's continued functions and shall show willingness at all times to meet with Owner to discuss and seek solutions to problems that may arise. **Work that is intrusively noisy in the Owner's opinion must be scheduled outside the school's normal operating hours of 6:00 am to 4:00 pm.**
- .2 Contractor's Use of Site: Contractor forces shall restrict their operations to least amount of site required and shall place items on site only in locations approved in advance by Owner.

- .3 Procurement and Supply of Critical Products:
 - .1 Before submitting a tender, verify that:
 - .1 Adequate supplies of critically scheduled products and equipment, upon which the tender is based, will be furnished.
 - .2 The requirements of the construction schedule will be met.
 - .3 The Work will be executed in accordance with the Tender Documents.
- .4 Phasing and Scheduling of Construction:
 - .1 It is intended that the early award of the contract allow the Contractor to **fully prepare** for construction on site in accordance with the milestone dates identified in Section 00100 INSTRUCTIONS TO BIDDERS. The Contractor is to obtain and arrange for all necessary approvals, material, equipment and manpower etc. as required to ensure that construction can proceed without delay and in a timely manner.
 - .2 Construction is to commence as noted in Section 00100 INSTRUCTIONS TO BIDDERS.
 - .3 Prior to award of contract the successful bidder will be required to prepare and submit the following completely detailed proposed schedule for the Work:
 - .1 A computer generated Bar Chart construction schedule showing actual progress charted against scheduled Work and incorporating the milestone dates listed above.
 - .2 Conform to the requirements of Section 01200. Schedules required as part of tendering requirements may be accepted as the Construction Progress Schedule at the Consultant's discretion.

END OF GENERAL INSTRUCTIONS

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.
- .2 Contractor to be responsible for the co-ordination and execution of each cash allowance item as for all other aspects of the work.
- .3 For each cash allowance item and when requested by the Consultant, provide the following services and/or information:
 - .1 Assist the Consultant to determine qualified suppliers,
 - .2 Obtain proposals from suppliers. A minimum of three quotations are to be obtained unless otherwise indicated.
 - .3 Make appropriate recommendations for the consideration of the Consultant.
 - .4 Notify the Consultant of any effect anticipated by selection of products or supplier under consideration regarding contract schedule and cost.
 - .5 On notification of selection by Consultant, enter into purchase agreement with designated supplier.
- .4 Expend portions of the cash allowance only on Consultant's written instructions.
- .5 The value of Cash Allowances covers the net cost to the Contractor of all aspects of the work related to the cash allowance items, unless otherwise indicated in the documents.
- .6 The Contract Price, and not the Cash Allowance, includes the Contractor's overhead and profit in connection with the cash allowance.
- .7 The Contract Price will be adjusted by written order to provide for an excess or deficit to the Cash Allowance. In the case of an excess, the Contractor shall be allowed an amount for overhead and profit as set out in the Documents.
- .8 Progress payments on account of work authorized under the cash allowance shall be included in the Consultant's monthly certificate for payment.
- .9 A schedule shall be prepared by the Contractor for the approval of the Consultant to show when items called for under Cash Allowance must be authorized by the Consultant so that progress of the Work will not be delayed.

1.2. CASH ALLOWANCE ITEMS

- .1 The total value of the Cash Allowance shall include, but not be limited to, the following items of work:
 - .1 Abatement:
 - .1 For the abatement of designated substances,
 - .2 Testing and Inspection:
 - .1 For the provision of independent testing and inspection by the Owner's agent,
 - .3 Finish Hardware Inspection:
 - .1 For the final inspection of Finish Hardware by the Owner's Hardware Inspector,
 - .4 Record Drawings:
 - .1 For the supply of record drawings,
 - .5 Video U/G Piping:
 - .1 For the videography of existing U/G piping systems per Owner direction,

1.3. TOTAL VALUE OF CASH ALLOWANCE

- .1 Include in the Base Bid the following Total per Section 00100 Instructions to Bidders:
 - .1 Total: \$107,500.00**

END OF CASH ALLOWANCES

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.

1.2. OAC MEETINGS

- .1 Purpose: to review policy and the status of money and the schedule.
- .2 Period: monthly at a mutual acceptable time.
- .3 Attendees:
 - .1 Owner
 - .2 Consultant
 - .3 Contractor
- .4 Chair: the Consultant
- .5 Party responsible for record and distribution of minutes of the meetings to each participant within five working days: the Consultant
 - .1 Minutes shall record decisions, comments, instructions required and a report on the schedule

1.3. SITE COORDINATION AND PROGRESS MEETINGS

- .1 Purpose: to identify and resolve construction coordination items.
- .2 Period: every second week on a mutually acceptable schedule
- .3 Attendees:
 - .1 Contractor's project manager and site supervisor
 - .1 Subcontractors invited by the Contractor
 - .2 Owner
 - .3 the Consultant
 - .1 Sub-consultants invited by the Consultant
- .4 Chair: Consultant
- .5 Party responsible for record and distribution of minutes of the meetings to each participant (Contractor responsible for distribution to Subcontractors) within five working days: Consultant
 - .1 Minutes shall record decisions, comments, instructions required and a report on the schedule
- .6 Submit the record of progress reports at site coordination and progress meetings
- .7 Present the as built Contract Documents at site meetings

1.4. SCHEDULE OF THE WORK

- .1 Submit the following schedules:
 - .1 Construction Progress Schedule
 - .2 Submittal Schedule for Shop Drawings and Product Data
 - .3 Submittal Schedule for Samples
- .2 Format:
 - .1 Prepare a detailed schedule in the form of a computerized bar chart using Microsoft Project or equivalent software with the following as a minimum:
 - .1 Provide a separate bar for each trade or operation.
 - .2 Provide a horizontal time scale identifying the first work day of each week.
 - .3 Format for listings: the List of Contents of this Specification.
 - .4 Mechanical and Electrical trades to be identified by tasks and phases.
- .3 Submission:
 - .1 Submit initial schedules within 25 days of award of Contract.

- .2 Update and resubmit the schedule if progress falls more than 2 weeks behind the current schedule.
 - .3 Submit updated progress schedule with each application for payment.**
- .4 Construction Progress Schedule:
 - .1 Provide schedule with activities itemized to enable the Contractor and the consultant to monitor the progress of the Work.
 - .2 Identify those items which are critical to the orderly progress of the Work.
 - .3 Identify target achievement dates for the following as a minimum:
 - .1 Milestone dates for completion of various phases of the work,
 - .2 Testing of all building systems and operations.
 - .3 Substantial Completion.
 - .4 Completion of all deficiencies.
- 1.5. PROGRESS PAYMENT SCHEDULE**
 - .1 Prior to commencement of the Work, submit a detailed Progress Payment Schedule to the Consultant for review.
 - .2 Submit progress payment schedule with values applied against the following:
 - .1 Mobilization and start-up
 - .2 General overhead expenses
 - .3 Each cash allowance
 - .4 Each Section of the specification (Divisions 2-16)
 - .5 \$5,000 for architectural as-built documents & manuals
 - .6 \$5,000 each for mechanical and electrical as-built documents & manuals
 - .3 With each Progress Billing Breakdown submit statutory declarations, WSIB certificate of clearance, current construction schedule.
- 1.6. PERSONNEL**
 - .1 Appoint a senior member of staff, with full authority to commit the Contractor to methods and schedules for construction, to participate actively in the administration and maintenance of the detailed construction schedule. Provide the necessary information on progress of the Work to enable a status report to be produced every two weeks.
 - .2 A senior member of staff must be available on a 24hr /day 7 day/week basis to respond to emergency situations occurring as a result of construction. Provide contact names and telephone numbers of personnel responsible for this function.
- 1.7. PROGRESS REPORTS AND CONSTRUCTION RECORDS**
 - .1 Maintain a permanent written record of the progress of the Work at the Place of the Work, open to inspection by the Consultant.
 - .1 Record the dates of commencement and completion of the different Subcontractor's part of the Work.
 - .2 Record the following on each report:
 - .1 Dates of construction
 - .2 Division of the Work upon which each group is engaged.
- 1.8. AS-BUILT DOCUMENT MAINTENANCE**
 - .1 During the progress of the Work maintain the following, in the complete sets, at the Place of the Work:
 - .1 As-built Contract Documents,
 - .2 Shop Drawings
 - .2 Mark changes, revisions, deletions and additions to the Work clearly, neatly, accurately and promptly
- 1.9. DEFICIENCIES**
 - .1 Correct deficiencies noted by the consultant, in accordance with the contract documents. The contractor will be deemed to have corrected all prior and subsequent typical deficiencies.

- .2 Do not proceed with the installation of the subsequent parts of the Work until deficiencies have been corrected.

END OF PROJECT ADMINISTRATION

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.

1.2. SHOP DRAWING SCHEDULE

- .1 Submit a shop drawing schedule, in accordance with GC 34.4, which allows for a minimum of 14 days for the consultant to review the shop drawings, from the date of receipt, to the date of postage with a courier. If the consultant requires resubmission of the shop drawings allow for an additional 14 days for review.
- .2 Re-submit the schedule monthly w/ application for progress payment to correspond to changes in the Construction schedule. Maintain the Consultants 14-day review period in the schedule re-submissions.

1.3. FABRICATION

- .1 Do not fabricate until shop drawings are indicated as "REVIEWED" or "REVIEWED AS NOTED".

1.4. CONSULTANT'S SHOP DRAWING REVIEW

- .1 The consultant's review of shop drawings is for the sole purpose of ascertaining conformance with the general design concept.
- .2 The consultant's review does not provide approval of the items. This remains the Contractor's responsibility.
- .3 Among other things, the Contractor remains responsible for:
 - .1 Detail design inherent in the shop drawings
 - .2 Errors and omissions in the shop drawings
 - .3 Meeting all requirements of the Contract Documents
 - .4 Confirmed and correlated site dimensions
 - .5 Information that pertains solely to fabrication processes, techniques of construction and installation.
 - .6 Co-ordination of the work of all trades

1.5. SHOP DRAWING REQUIREMENTS

- .1 Drawings are to be drafted professionally in a neat, legible manner.
- .2 Indicate the following information at a minimum as applicable:
 - .1 Plans, sections and details
 - .2 Verified site dimensions
 - .3 Materials thicknesses and finishes
 - .4 Methods of setting and sealing
 - .5 Methods of securing, fastening and anchoring including field connections.
- .3 Do not make product substitutions on shop drawings without the consultant's written acceptance in accordance with the product substitution proposal process. Replace unaccepted product substitutions and complete the Work in accordance with the Contract Documents.
- .4 Determine which shop drawings the Department of Buildings of the Municipality will require for its approval and submit two final copies of each shop drawing to the Department of Buildings.

1.6. SHOP DRAWING PROCEDURES

- .1 Execute the following prior to submitting all shop drawings to the consultant:
 - .1 Review, check and mark-up the shop drawings with your comments and revisions.
 - .2 Stamp each shop drawing.
 - .3 Fill-in the contractor's review date and signature of the contractor's reviewer.

- .2 Shop drawings which do not conform to the above criteria will be automatically returned without review and any resulting delays will be the contractor's responsibility.
- .3 Submit the following for the consultant's reviewer:
 - .1 1 original of each stamped shop drawing to be returned to the Contractor and 4 prints of each stamped shop drawing which will not be returned to the contractor.
 - .2 If catalogue cuts are acceptable to the consultant, submit 4 copies of catalogue cuts for review. Only one set will be returned to the Contractor.
- .4 Do not resubmit shop drawings indicated as "REVIEWED" or "REVIEWED AS NOTED". Contractor is responsible to make copies of reviewed drawings as required for their own use, for distribution to Subcontractors, suppliers, etc., for submission to Building Department (if requested) and for submission to Owner in Manuals at Project close-out.
- .5 Re-submit shop drawings indicated as "REVISE AND RESUBMIT" with the required changes and comments addressed. Insert the letter "R" after the shop drawing number on resubmitted shop drawings, re-date and re-sign. Identify revisions from earlier submissions graphically on the revised shop drawings.

END OF SHOP DRAWINGS

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS:

- .1 The requirements specified in this Section apply to the independent inspection and testing specified under technical specifications Sections and / or as directed by Consultant.
- .2 Requirements specified in this Section do not apply to the following:
 - .1 Inspection and testing required by laws, ordinances, rules and regulations and orders of public authorities.
 - .2 Testing, adjustment and balancing of mechanical and electrical systems and equipment.
 - .3 Inspection and testing carried out exclusively for the Contractor's convenience.
 - .4 Tests specified in Division 2 to 16 inclusive, to be included in the Contract such as mill tests, certificates of compliance and testing to be carried out by the Contractor under direction of the Consultant
- .3 Failure by independent testing agency to detect defective work or materials shall not in any way prevent later rejection, when such defect is discovered, nor shall it obligate Consultant for final acceptance.
- .4 Independent inspection and testing specified in this Section is not meant to replace or supplement Contractor's own quality control nor relieve Contractor of his contractual obligation to meet requirements of Contract Documents.
- .5 Costs for independent inspection and testing, but not covering Contractor's related responsibilities specified hereinafter, are to be **paid for by the Contractor through the Cash Allowance (Section 01200)**.

1.2. DUTIES OF TESTING AGENCY :

- .1 Testing Agency is expected to do the following:
 - .1 Act on a professional and unprejudiced basis and carry out inspection and testing functions to establish compliance with requirements of Contract Documents.
 - .2 Check out work as it progresses and prepare reports stating results of tests and conditions of work and state in each report whether specimen tested conform to the requirements of the Contract Documents, specifically noting deviations.
 - .3 Distribute reports as follows:

.1 Consultant:	1 copy
.2 Subconsultants affected:	1 copy
.3 Contractor:	2 copies
.4 Building Department:	1 copy
.5 Owner:	2 copies
 - .4 Testing agency is not authorized to release or amend any requirements of Contract Documents, nor to approve or accept any portion of the work.

1.3. CONTRACTOR'S RESPONSIBILITIES:

- .1 Contractor shall be responsible for and pay the expense of all of the following:
 - .1 Notification of Consultant and testing agency minimum 48 hours in advance of operations to allow for assignment of personnel and scheduling of tests without causing a delay in work.
 - .2 Provide testing agency with access to work at all times.
 - .3 Supply material samples for testing.
 - .4 Supply casual labour and other incidental services required by testing agency.
 - .5 Provide facilities for the storage of samples.
 - .6 Where materials are specified to be tested, deliver representative samples in required quantity to designated testing laboratory.
 - .7 Make good work disturbed by independent testing and inspection
- .2 When initial inspection and testing indicates non-compliance with Contract Documents, any subsequent re-inspection and testing occasioned by non-compliance shall be performed by same testing agency and cost thereof borne by Contractor.

END OF QUALITY CONTROL

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.

1.2. ADMINISTRATIVE REQUIREMENTS

- .1 Provide and maintain temporary utilities, facilities and controls in order to execute the work expeditiously.
- .2 Maintain temporary utilities, facilities and controls in a neat and tidy condition.
- .3 Remove from site all such work after use.

1.3. NOISE REDUCTION

- .1 In addition to requirements of the anti-noise by-laws, take special precautions and apply noise abatement measures to reduce public exposure to noise to a minimum. These precautions and measures consist of, but are not limited to, the following:
 - .1 Shields or other physical barriers to restrict the transmission of noise.
 - .2 Soundproof housings or enclosures for noise producing machinery such as compressors, pumps, motors or generators.
 - .3 Efficient intake and exhaust silencers on air equipment.
 - .4 Efficient intake and exhaust mufflers on internal combustion engines.
 - .5 Conducting truck loading, unloading and hauling operations so that noise is kept to a minimum.
 - .6 The use of electric rather than internal combustion engine power on chain equipment in fixed locations, or other equipment where electric power is available.
 - .7 Placing stationary noise producing equipment at maximum distance from public areas.

1.4. UTILITIES

- .1 Equipment, Mechanical and Electrical Apparatus and Systems
 - .1 The Contractor is to visit the site prior to bidding and determine exactly the nature and extent of the mechanical and electrical work which may require relocation, temporary or permanent removal and replacement to facilitate the installation of the new work. Verification of the existing conditions must be determined prior to bidding.
 - .2 If deemed necessary, adequate allowance is to be made in the Contract Price to cover all costs of temporary removal and replacement or relocation of existing mechanical and electrical equipment or any other systems using appropriate tradesmen.

1.5. TEMPORARY UTILITIES

- .1 Temporary Electricity
 - .1 Existing power system may be utilized to provide a source of electricity for adequate temporary lighting, operation of power tools, and to ensure proper completion of the work.
 - .2 Provide and maintain any necessary additional temporary electrical systems to requirements of CSA C22.1-1990, Canadian Electrical Code, Part 1 – Temporary Wiring.
- .2 Temporary Heating, Cooling and Ventilating
 - .1 Under no circumstances is air handling equipment to be used to help heat a facility until the project has been substantially cleaned or has reached the point of substantial completion and as agreed by Board staff and the consulting team.
 - .2 Upon approval of the Owner, the permanent heating system of the building, or portions thereof, may be used when available. Be responsible for repair of damage thereto.
 - .3 On completion of work, replace filters in permanent heating system and clean all ducts.
 - .4 Provide and maintain any necessary additional temporary heating and ventilating systems.

- .5 Provide minimum one air change per hour for enclosed areas receiving architectural finishes.
- .6 Prior to commencement of work using hazardous or volatile adhesives, coatings or substances, install adequate mechanical ventilation.
- .7 Do not allow excessive build-up of moisture in building. Provide dehumidification as required.
- .3 Temporary Lighting
 - .1 Provide and maintain temporary lighting throughout the work for emergency evacuation, safety, security and performance of the work.
 - .2 Permanent lighting may be used during construction.
- .4 Temporary Telephone
 - .1 Provide and pay for temporary telephone service and fax machine on a separate line necessary for own use and use of Consultant during construction. Make available for all trades.
- .5 Temporary Water
 - .1 The existing building service may be utilized as a source of potable water for construction use. Provide any necessary temporary extension required for construction.

1.6. CONSTRUCTION FACILITIES

- .1 Field Offices and Sheds
 - .1 The Contractor's offices and storage are to be located in trailers provided by the Contractor located at the Place of Work as directed by the Owner.
 - .2 Provide and maintain in clean condition, adequately lighted, heated (min. 20 degrees C) and ventilated office with sufficient space for conducting OAC meetings (20 persons), superintendent's office, filing documents and laying out drawings.
 - .3 Furnish office with drawing layout table, meeting table and sufficient quantity of padded chairs for meeting attendees.
 - .4 Do not store building materials or equipment in construction office.
 - .5 Provide the following field office facilities:
 - .1 Telephone services for Contractor's own use.
 - .2 One facsimile machine compatible with the Consultant's fax machine.
 - .3 One photocopy machine
 - .4 "No Smoking" signs.
 - .6 Provide and maintain in a clean, orderly condition, lockable, weatherproof sheds for storage of tools, equipment and materials.
 - .7 Provide proper flammable and explosive materials storage.
- .2 First Aid
 - .1 Provide emergency and first aid equipment as prescribed by authorities having jurisdiction.
 - .2 Mount emergency and first aid equipment in a prominent and easily accessible location with easily identifiable labels.
 - .3 A minimum of one person trained in basic first aid shall be on site at all times. This person may perform other duties, but must be available immediately to render first aid when needed. Provide documentation confirming first aid training when requested by Consultant.
- .3 Sanitary Facilities
 - .1 Supply, install and maintain in a clean condition, a suitable and convenient privy (portable toilet) or water closet accommodation for workers. Locate as directed by the Consultant. Supply, install and maintain a supply of clean drinking water at convenient locations about the Site. All privies are to be kept clean and in an odour free condition. They are to be cleaned out twice weekly. Remove all privy and water closet accommodations upon Contract Completion.
 - .2 Use of existing washroom facilities is not permitted.

1.7. PROTECTION

- .1 Work shall include necessary methods, materials, and construction to ensure that no damage or harm to existing building, the Work, materials, property and persons results from Work of this Contract.
- .2 Protect adjacent private and public property: make good damage.
- .3 Protect finished surfaces of completed work and existing building from damage by restriction of access or by use of physical means suitable to the material and surface location. Where work must be performed over finished floors, provide protection against damage and debris.
- .4 Protection of Public Area:
 - .1 Fully cover openings over public areas to protect against falling articles during school operating hours.
- .5 Protection of Existing Equipment
 - .1 Equipment and existing work moved or altered to facilitate construction, moved material or equipment must be stored, protected with dust-tight covers and subsequently returned to its original location. The Consultant's approval is required for the installation of temporary support devices into existing roof or wall members for the erection of equipment or machinery. Repair roof and wall members used for this purpose to the satisfaction of the Consultant.
 - .2 All existing (in use) and new equipment damaged while carrying out the Work must be restored with new products matching the original equipment.
- .6 Above and Underground Services
 - .1 The Contractor will be responsible for the protection of all pipes, ducts, cables, conduits, wires and other services against damage arising from the execution of work during the Contract period. The Contractor will take all necessary precautions to locate the services.
 - .2 The Contractor will be responsible for making good to the satisfaction of authorities having jurisdiction any damages to services resulting from his execution of work without any additional cost to the Board.
- .7 Fire Equipment
 - .1 Take precautions to prevent fires. Comply with local fire department regulations and in accordance with Section 01 51 17 – Fire Safety Requirements.
 - .2 Supply and install adequate fire fighting equipment of a type appropriate to the hazard anticipated.
- .8 Protection of Workers
 - .1 Workers must comply with the Occupational and Health and Safety Act and Regulations for Construction Projects.

1.8. SITE MAINTENANCE

- .1 Maintain the site and adjacent premises in a clean and orderly condition, free from debris and other objectionable matter. Remove rubbish and surplus material, equipment and structures (immediately). If the site is not cleaned (within 48 hours after the Contractor has been instructed to do so,) the Consultant may order the site cleaned and retain the cost from monies due, or to become due, to the Contractor.

1.9. PUBLIC CONVENIENCE AND SAFETY

- .1 Products which are not in use must be stored in storage areas reserved by the Contractor for such purpose, and must not be left lying on streets, sidewalks, boulevards or elsewhere within public view except with the Consultant's and Board's permission. Products which the Consultant may permit to be stored elsewhere other than in the Contractor's storage areas must be neatly stacked or otherwise disposed and must be so maintained.
- .2 Maintain sidewalks and decked areas at and adjacent to the site in a safe condition throughout the Contract. Promptly remove ice and snow.
- .3 Keep haul routes free at all times from materials spilled on the street surfaces and maintain the streets in clean condition to the satisfaction of the Consultant and the street authorities.

- .4 The Consultant may inspect haul routes, the site and adjacent premises daily and may halt operations, withhold payment or carry out such additional operations as necessary, deducting the cost from monies due, or to become due, to the Contractor.
- 1.10. ACCESS AND EGRESS TO SITE**
 - .1 Site access and egress will be as directed by the Board or Consultant.
- 1.11. SITE VISITORS**
 - .1 During the progress of the Work, afford access to visitors duly authorized by the Board or Consultant and facilitate inspections or tests they may desire to make.
- 1.12. CONTRACTOR'S USE OF SITE**
 - .1 Limit areas of work and storage as directed on site by the Board or Consultant. The designated areas for storage of materials will be established and maintained.
 - .2 Do not encumber site with materials or equipment.
 - .3 Move stored products or equipment which interfere with daily operations of the schools.
 - .4 Obtain and pay for use of additional storage or work needed for operation.
 - .5 Do not obstruct entrances, stairs or fire exits. The Contractor must maintain all fire routes.
- 1.13. CONSTRUCTION AIDS**
 - .1 Provide, operate and maintain hoists and cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
 - .2 Hoists and cranes shall be operated by qualified operator.
 - .3 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms and temporary stairs as required for the safe execution of the work.
- 1.14. VEHICULAR ACCESS AND PARKING**
 - .1 Provide for access of emergency vehicles at all times.
 - .2 Parking will be permitted on site within the construction staging area designated on the Drawings and as directed by Consultant.
- 1.15. TEMPORARY FIRE PROTECTION**
 - .1 Provide and maintain temporary access routes to exits, clear and visibly identified 24 hours a day.
- 1.16. BARRIERS**
 - .1 Protective Enclosures:
 - .1 Provide and maintain temporary hoardings around construction as shown on the Drawings and / or as required to enclose the Work at all stages and phases and as required by jurisdictional authorities.
 - .2 Temporary hoarding shall be as follows:
 - .1 **Construction hoarding (site perimeter): 1800 mm high chain link fencing c/w all required posts and rails.** Provide lockable gates for access to site by workers and vehicles. Enclose perimeter of construction area and/or as indicated on the drawings.
 - .2 **Temporary construction hoarding:** "fast fence" purpose-made units securely fastened and braced.
 - .3 **Interior Hoarding:** Provide fire-rated, dust tight, temporary enclosures (steel studs, insulation and gypsum board), **rated for a minimum 1 hour**, where indicated on Drawings and as required to separate occupied areas from construction areas. Provide hollow metal doors and frames, c/w lockable hardware and 45 minute fire rating, where required for access.
 - .3 Provide and maintain full safety protection at open shafts in floors, roof decks and other working surfaces.
 - .4 Provide and maintain suitable warning signs as required by all applicable regulations and by-laws.
 - .2 Weather Enclosures:

- .1 Provide temporary, fire-rated (min. 1HR), weather tight enclosures to unfinished door and window openings, tops of shafts and other openings in floors and roofs and where indicated on the Drawings.
- .2 Provide weather tight, vandal-proof, insulated (R12 min.) enclosures between existing building and/or finished new construction and areas of construction where the new construction is not weather tight and / or heated.
- .3 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Dust Barriers:
 - .1 Provide dust tight screens or partitions to localize dust generating activities, and for the protection of workers, occupied spaces, finished areas of work and the public.
 - .2 Maintain and relocate protection until such work is complete.
- .4 Security Measures:
 - .1 Maintain security of construction site by control of access through enclosing fences, barricades and hoardings during times work is in progress, and by locking hardware otherwise.
 - .2 After new building is enclosed, maintain its security by adequate barriers to entry, and by temporary doors equipped with locking hardware.
 - .3 Maintain security at all times during shut-downs due to strikes or lockouts.
- 1.17. PERCUSSIVE DEVICES**
 - .1 The Contractor may not, under any circumstances, use percussion-type (power actuated) fastening devices which are stressed in withdrawal, on any part of this work. Only low velocity plunger-type devices are permitted. All methods of installing fasteners must be approved by the Consultant.
- 1.18. DAMAGE RESPONSIBILITY**
 - .1 The Contractor must be responsible for and make allowance for any damage or debris his work has caused and must initiate and pay for any clean-up work required to return the building or any other associated areas to an 'as was' condition.
 - .2 The Contractor will be responsible to repair any damage to the building components caused by his work.
- 1.19. DISPOSAL**
 - .1 Waste Management Disposal Company must be approved and licensed by the Ministry of Environment for transportation and disposal of all site and construction related materials.
 - .2 Transportation of all materials must meet Ministry of Environment guidelines.
 - .3 Contractors are required to submit copies of all Bills of Lading from disposal facilities and transfer stations to the Consultant as proof of compliance.

END OF TEMPORARY FACILITIES

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.

1.2. WORKMANSHIP

- .1 All work performed on the Owner property shall be done by mechanics skilled in their respective trades. Where required by code or other by-laws and regulations, trades people shall be licensed in their trade. All workmanship shall be of the highest calibre in accordance with the best standard practice, unless special methods or performance standards are specified or given in writing by the Owner or Consultant.
- .2 Without affecting the requirements as outlined above, the work shall be carried to completion as expeditiously as possible.
- .3 Where not otherwise specified or shown, all work must conform to the local governing codes and by-laws and to the Ontario and National Building Codes. All codes, standards, regulations and by-laws shall be of the latest date or amendment prior to tender issue.
- .4 Any work not acceptable to the Owner or Consultant or local authorities shall be removed and replaced when and as directed by them. The cost of re-executing such work shall be borne by the Contractor.

1.3. SCHEDULING

- .1 The Contractor shall take all possible steps to minimize interference with school operations and schedule their work, etc., in such a manner as to accomplish this end.
- .2 Schools are normally open for a Contractor to perform work during weekdays. These hours should be confirmed with the Plant Services Department prior to completing any work schedule. Weekend work can be arranged where the Contractor is prepared to pay for custodial coverage at the applicable overtime rates.
- .3 The Contractor shall provide the Owner with a complete plan or layout of their work schedule prior to commencing any work on Owner property. All work scheduled shall be approved by the Plant Services Department.
- .4 The Contractor must report to the school office before proceeding elsewhere on Owner property.

1.4. CUTTING AND PATCHING

- .1 **Cutting and patching is the responsibility of the trade requiring the opening.** The drawings do not attempt to indicate all the openings required to execute the work. Trades are responsible to provide **all** openings, in new or existing construction, required to complete their work.
- .2 Execute cutting neatly and carefully, no larger than necessary, employing workers skilled in the erection of the part of the Work being cut.
- .3 Patch parts of the Work to match adjacent construction and finishes unless otherwise specified or indicated on Drawings.
 - .1 Provide patching products equal to existing finishes
 - .2 Join new work to existing in neat, accurate manner
 - .3 Provide soundproof interior junctions.
- .4 Prior to cutting and drilling through concrete, structural masonry and steel and load bearing members, including floors, ceilings, columns, beams and walls, obtain Consultant's written acceptance.
 - .1 X-ray all reinforced concrete slabs to identify location of reinforcing where new penetrations are required. Plan and execute openings to avoid cutting reinforcing and as directed by Consultant.

- .2 Design and provide permanent and temporary reinforcement and supports, as required to complete the work or as directed by the Consultant.
- .5 Maintain fire separations and provide fire and smoke penetration sealants in conformance with Section 07270 in cut and patched parts of the Work.
- .6 Unless otherwise indicated, run piping, ducts and conduit in ceiling and furred spaces and bury conduit in walls.
- .7 Saw-cut floors, walls and ceilings accurately. Provide holes and openings no larger than necessary to minimize damage. Core drill circular holes in concrete. Accurately cut new openings for electrical outlets and other recessed items in walls.
- .8 After cutting and patching is complete, re-finish surfaces to minimum 100mm outside the patch perimeter. Match patch finish to existing adjacent surfaces to completely conceal the patch. Where surfaces are painted, **paint entire surface associated with cutting and patching to nearest break in wall surfaces such as inside and outside corners.**
- 1.5. MECHANICAL AND ELECTRICAL LOCATION DRAWINGS**
 - .1 Mechanical and electrical drawings indicate approximate locations diagrammatically. Prior to installation, request and obtain final location and arrangement drawings for mechanical and electrical items. Allow the Consultant to adjust final locations within 5'-0" radius from the diagrammatic position indicated, without change to the Contract Price.
 - .2 Align and cluster devices and fitments neatly in accordance with specified mounting heights.
- 1.6. BUILT-IN ITEMS**
 - .1 Provide and coordinate the location of chases, slots and reglets including frames, sleeves, inserts, anchors, fasteners and bolts, forms and templates.
- 1.7. ANCHORS AND FASTENERS**
 - .1 Do not use materials subject to electrolytic action and corrosion where conditions will be liable to cause such action.
- 1.8. TRADEMARKS AND LABELS**
 - .1 Do not expose trademarks and labels, including applied labels in the finished Work. Remove visible trademarks and labels except those, which are essential to obtain identification of mechanical and electrical equipment for maintenance and replacement purposes and for mandatory fire ratings.
- 1.9. PRODUCT DELIVERY, STORAGE AND HANDLING**
 - .1 Package, crate and brace products to prevent damage during delivery, storage and handling.
 - .2 Provide protection to finished surfaces to prevent damage during delivery, storage and handling.
 - .3 Store packaged materials in original undamaged condition with manufacturer's labels and seals intact.
 - .4 Handle and store materials in accordance with manufacturer's and supplier's recommendations in protected location.
 - .5 Replace products damaged during delivery to the Place of the Work, storage, handling and installation.
- 1.10. CONCEALMENT OF SERVICES**
 - .1 Conceal pipes, service lines, wiring, conduit and ducts in purpose-built masonry chases in existing and new walls, behind furring or above ceilings except where they are specifically indicated as being exposed to view. Where no existing or new ceiling is provided, such items may be exposed at the ceiling level.

END OF PRODUCTS AND WORKMANSHIP

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.
 - .4 OAA/OGCA Take-over Procedures, OAA/OGCA Document No. 100.

1.2. ABOVE CEILING REVIEW

- .1 Prior to installation of gypsum board ceilings and placing of acoustical ceiling tiles (except tiles with sprinkler heads, detectors and other fixtures) advise Consultant that above ceiling work is complete and ready for review. Provide 48 hour notice of readiness to the Board. Provide 72 hour notice for any cancellation or changes; failure to do so may result in a back charge to the Contractor for costs of Owner's personnel.
- .2 Owner, Consultant and sub consultants will conduct above ceiling review and prepare list of deficiencies.
- .3 Contractor shall correct deficiencies and advise Consultant when all deficiencies have been corrected.
- .4 Gypsum board ceilings and acoustical ceiling tiles may not be installed before Consultant has verified that all above ceiling deficiencies have been corrected.

1.3. TAKE OVER PROCEDURE

- .1 Generally, at the completion of the Work arrange for, conduct and document final inspection, closeout and take-over in accordance with the process as described in the OAA/OGCA Document No. 100 "Take-over Procedures" and Supplementary Condition of CCDC #2 G.C. 5.4.
- .2 Contractor's Inspection: The Contractor and his Sub-Contractors shall conduct an inspection of the Work, and correct all deficiencies. **Contractor is to provide a written list of deficiencies to the Consultant.**
- .3 Consultant's Inspection: The Contractor shall notify the Consultant in writing of satisfactory completion of the "Contractor's Inspection" and request a "Consultant's Inspection" for Substantial Performance. The Architect, Consulting Engineers, the Contractor and the Owner shall be present for the "Consultant's Inspection". Consultant's Inspection for Substantial Performance will not be scheduled until above ceilings are 100% deficiency free.
- .4 Deficiencies: During the "Consultant's Inspection" a list of all deficiencies shall be drawn up by the Architect and his Consultants. The Contractor shall correct all deficiencies in a satisfactory manner. Deficient work will be valued at 200% of "normal" costs as determined by the Architect and an amount retained on that basis until all deficiencies have been corrected and accepted by the Consultant subsequent to Final Inspection.
- .5 When the Contractor is satisfied that all deficiencies noted by the Architect have been corrected, the Contractor shall request, in writing, a "Final Inspection". The final inspection team shall consist of the Owner, Architect, Contractor and Engineers if required.
- .6 Declaration of Completion: When it is mutually agreed by the Final Inspection team that the work is substantially completed, the Contractor shall issue, in writing, a declaration to the Owner that:
 - .1 "All work in respect to the Contract for (Name of Project) has been completed as of (day month year) and no further work is required except for repairs or replacements as are outlined within this declaration of completion".
- .7 Certificate of Substantial Completion: The Architect will state in writing, upon agreement with the above declaration, his approval of the inspected work, as "Substantially Complete".

- .8 Commencement of Lien and Guarantee Periods: The date of the publication of the Substantial Completion Certificate shall mean immediate commencement of the lien period as specified by Provincial lien laws and the commencement of Guarantee periods.
- 1.4. RECORD DRAWINGS AND SPECIFICATIONS**
 - .1 Upon completion of Work and ten (10) days prior to requesting Substantial Completion, arrange, pay for and submit to the Consultant one (1) set of as-built record Drawings in Autocad R2013 format.
 - .2 Submit Record Drawings conforming to the following requirements:
 - .1 Each as-built deviation/change from the Contract Documents recorded including information, specifications, drawings, instructions and details contained in Site Instructions, Change Orders and Cash Allowance Authorizations. Reference only to SI, CO and CAA numbers is not acceptable.
 - .2 Changes professionally drafted and subject to the Consultant's acceptance.
 - .3 Changes located by outline clouding and referenced to title revisions column.
 - .3 Submit one set of notated specifications indicating as built changes to the Contract Documents.
 - .4 Refer to Divisions 15 and 16 for supplementary requirements.
- 1.5. MAINTENANCE AND OPERATING INSTRUCTIONS MANUAL**
 - .1 On completion of the Work and ten (10) days prior to requesting Substantial Completion, submit 1 hardcopy set and 1 digital set of the maintenance and operating instructions manual to the Consultant. Include the following:
 - .1 A complete set of reviewed shop drawings, folded to 8 ½" x 11" size and contained in heavy duty manila envelopes, numbered and labeled. Follow specification format with no more than one (1) Section per envelope.
 - .2 Data books and literature,
 - .3 Maintenance instructions specifying warnings of any maintenance practice that may damage or disfigure the specified products,
 - .4 Operational information on products, cleaning and lubrication schedules, filters, overhaul and adjustment schedules and similar maintenance information,
 - .5 Recommended maintenance products,
 - .6 Extended warranties.
 - .2 Submit instructions in simple language so as to guide the Owner in the proper operation and maintenance of building components.
 - .3 Organize contents into applicable categories of the Work numbered to match the Specification Section numbering system.
 - .4 Bind the contents of the maintenance and operating instructions manual in three-ring, hard covered, vinyl jacketed binders and label the spine "MAINTENANCE AND OPERATING INSTRUCTIONS MANUAL" and include the following:
 - .1 Title sheet, labeled "Operating and Maintenance Instructions" containing project name and completion dated.
 - .2 List of contents.
 - .3 List of names, addresses and phone numbers of installing Subcontractors and suppliers for future repair or maintenance.
 - .4 Schedule of Finishes (as-built) listing paints, colours and fabrics provided.
 - .5 Refer to Divisions 15 and 16 for supplementary requirements.
- 1.6. MISCELLANEOUS CLOSEOUT SUBMITTALS**
 - .1 In addition to Items 1.4 and 1.5, Supplementary Condition of CCDC #2 G.C. 5.4 and ten (10) days prior to requesting Substantial Completion, submit the following to the Owner with a copy to the Consultant:
 - .1 Hydro certificates
 - .2 Fire Alarm verification report
 - .3 Testing, adjusting and balancing reports

- .2 Refer to Section 00810, GC 5.8.2 regarding a reserve fund that will not be paid until all items in the Miscellaneous Close-out Submittals List have been provided to the Owner's satisfaction. Note that this reserve is in addition to the statutory holdback.

1.7. TOTAL PERFORMANCE

- .1 Final payment will not be considered until after the 45 day lien period is completed.
- .2 Prior to requesting a final inspection do the following:
 - .1 Submit a final request for payment incorporating all approved changes to the Contract Price, including adjustments to the Cash Allowances listed in Section 01020.
 - .2 Ensure completion of all deficiencies, clean all areas, surfaces and components affected by the Work.
 - .3 Ensure that all services, equipment, apparatus are properly tested, adjusted, balanced and fully operational.
 - .4 Provide a written statement that items .2 and .3 above have been completed.
- .3 After all deficiencies have been corrected, submit to the Consultant a written request for a final inspection containing a statement that deficiencies have been corrected and that the project is ready for final inspection. This inspection shall be carried out by the same parties involved in the Substantial Performance deficiency inspection.
- .4 If all deficiencies have not been corrected in the opinion of the Consultant, a final deficiency list shall be prepared by the Contractor in the same manner as specified herein for the Substantial Performance deficiency inspection and the inspection procedure repeated until all items have been completed to the satisfaction of the Consultant.
- .5 The Consultant will conduct one Total Performance inspection and a maximum one follow-up inspection. Subsequent inspections due to the Contractor's failure to complete the work shall be paid for by the Contractor at current OAA per diem rates. The Owner will deduct said expenses from the Contractor's payment.
- .6 Failure of the Contractor to correct the listed deficiencies within the 45 day lien period will result in direct action being taken by the Owner to correct the deficiencies outside of the Contract.
- .7 On the 45th day of the lien period final inspection shall be made to ascertain the Contractor's progress with deficiencies and to invoke the above clause should it be required.

1.8. FINAL CLEANING

- .1 Upon completion of the Work, prior to Substantial Performance or where Work is phased, upon completion of each phase, commence final cleaning of the area.
- .2 Clean the Place of the Work thoroughly, free of rubbish and surplus material. Dispose of rubbish and debris. Vacate the Place of the Work in a clean and tidy condition satisfactory to the Consultant. **Note that final cleaning is intended to allow the Owner to occupy the Work without being required to do any further cleaning.**
- .3 Dismantle and remove the work of the Temporary Facilities Section from the Place of the Work.
- .4 General: All surfaces within the scope of work are to be cleaned.
 - .1 Floors :
 - .1 Floors are to be swept, and mopped clean with a neutral detergent. Floor sealers, as per specifications, are to be used on new terrazzo only. Under no circumstances are new floors to be waxed.
 - .2 Completed areas are to be thoroughly vacuumed prior to handover to Owner.
 - .3 Countertops and Millwork:
 - .4 Remove all adhesives as recommended by the finish material manufacturer.
 - .5 Vacuum and wipe clean with a non-abrasive damp cloth.
 - .2 Walls:
 - .1 Wipe clean with a non-abrasive damp cloth.
 - .3 Light Fixtures and Other Devices:
 - .1 The contractor is to ensure that all light fixtures and other devices are to be left in a clean, pristine condition.

- .4 Chalkboards:
 - .1 All new chalkboards are to be chalked in; this chalk will remain on the boards and will be removed by Board Custodial Staff.
- .5 Windows and Glazing:
 - .1 All windows are to have all markings, over spray, etc. removed and scraped clean. All glazed surfaces are to be cleaned with a suitable product and left streak free. All window and door frameworks are to be wiped clean with a non-abrasive damp cloth.
- .6 Ceramic/Porcelain Tile – Walls:
 - .1 Wipe clean with a non-abrasive damp cloth.
- .7 Ceramic/Porcelain Tile – Floors:
 - .1 Ceramic or porcelain tile is to be scrubbed so that all dirt, debris, stains and marks are removed. Grout is to be sealed.
- .8 All other surfaces, fixtures and equipment
 - .1 Wipe clean with a non-abrasive damp cloth.
- .9 Washrooms, Bathrooms, Shower and Drying Areas
 - .1 Remove all adhesives, grouts, etc. as recommended by the finish material manufacturer.
 - .2 All floors are to be swept, and mopped clean with a neutral detergent.
 - .3 All walls are to be wiped clean with a non-abrasive damp cloth.
 - .4 All fixtures are to be wiped clean with a non-abrasive damp cloth.
 - .5 All mirrors are to have all markings, over spray, etc. removed and scraped clean and cleaned with a suitable product and left streak free. Remove all protective plastic coverings.
- .10 Use manufacturers' recommended cleaning products for each product provided in the Work.
- .11 Remove stains, efflorescence, paint, plaster, labels, temporary coverings and protection, caulking compounds and dirt.
- .12 Touch up damaged painted areas to satisfaction of Consultant.
- .13 Maintain cleaning until Owner has taken possession of Work.

END OF CONTRACT CLOSEOUT AND FINAL CLEANING

END OF EXTENDED WARRANTIES AND GUARANTEES

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS:

- .1 Conform to all applicable Sections of Divisions 1.

1.2. DESCRIPTION

- .1 Related Work Specified Elsewhere:
 - .1 Disconnection, sealing off, demolition & alterations to existing mech/elect services & equipment - Divisions 15 & 16.
- .2 Scope of Work:
 - .1 Contractor shall demolish & remove all structures, foundations, walls, floors, doors, frames, floor finishes, suspended ceilings, etc shown dashed / noted on drawing or as referenced in the Room Finish Schedules in specification **or as required to complete the work**. Refer to Part 2 of this Section for directions regarding items removed by Owner, items or materials resulting from demolition, etc.
 - .2 Prepare existing floor substrate as specified herein.
 - .3 Visit site at time of tender to determine & include for full extent of demolition & removal work involved.

1.3. REQUIREMENTS OF REGULATORY AGENCIES

- .1 Conform to 2017 OBC, municipal by-laws & all other requirements of utility or provincial authorities having jurisdiction. Submit all required documentation, gain all authority approvals, obtain & pay cost of separate demolition permits if such are required, pay all fees, inspection charges, disconnect charges, etc related to performing of demolition & removal work.
- .2 Put in place all safety measures such as hoarding, signage, garbage bins, etc & perform all temporary disconnect/capping-off work for existing services as required by Owner, Municipality & Provincial or Utility authorities having jurisdiction. Include all costs for erection & removal of such protective devices. Remove such devices immediately upon completion of demolition & removal work.
- .3 Configure & schedule work such that all required fire exits for existing building are maintained throughout course of demolition & removal work.

1.4. QUALITY ASSURANCE

- .1 Demolition & removal work shall be performed by skilled experienced personnel working for qualified demolition subcontractor with appropriate insurance coverage to perform described. Firms submitting tenders shall be actively engaged in work of this type & shall show proof of such experience if requested.
- .2 Demolition subcontractor shall appoint knowledgeable experienced job foreman who shall be on site full during demolition & removal work. Job foreman shall remain on site until all deficiencies are corrected & all clean-up work is performed to consultant's satisfaction.
- .3 Demolition & removal work shall be performed with utmost care to prevent damage to adjacent equipment/materials /finishes to be maintained or to items being removed & turned over to Owner or relocated. Make good, at no additional cost to Owner, any damage caused by failure to exercise care & protection.
- .4 Provide all measures required to ensure that areas being demolished are left secure after normal working hours.

1.5. INTERRUPTION OF EXISTING SERVICES

- .1 Prior to commencement of any demolition & removal work, determine with care location & nature of existing mech/elect services within demolition work areas. Verify position of such items with Owner, local utilities, etc. Disconnection, capping-off demolition & alterations to existing mech/elect service & equipment shall be performed by properly qualified & experienced mech/elect subcontractors. Coordinate with mech/elect subcontractors & with Owners representatives to ensure proper scheduling of all necessary disconnects to allow demolition work to proceed yet permit Owner to continue his use of adjacent portions of

building. Interruption of existing services necessary to Owners continued functions shall only be permitted when sufficient advance warning has been given to Owner that he can make alternative arrangements. Existing services shall be interrupted for shortest possible length of time each occurrence.

1.6. PROTECTION

- .1 This Subcontractor shall be responsible for protection of existing building assemblies /equipment /materials/finishes to be maintained so that they are not damaged by his demolition & removal work.
- .2 Provide temporary dust-proofing by means of partitions, filters, coverings, flexible screenings & tape to effectively isolate existing material/finishes /equipment. Such measures shall be in place prior to commencement of any demolition work. Openings in existing floors, walls & ceilings shall be covered & taped to prevent dust migration. Existing return air grilles leading from areas being demolished shall be equipped with temporary filters & cleaned or replaced on regular basis. Include all costs for erection & removal such protective devices. Remove such devices immediately upon completion of demolition work.
- .3 Where demolition results in a portion of the existing building being exposed to the exterior, provide temporary, weather-tight, insulated hoarding partition sufficient to prevent infiltration of exterior elements into the building.
- .4 Prevent damage of structures, services, walks, paving, trees, landscaping and adjacent grades. Make good damage caused by demolition work.
- .5 Prevent debris from blocking roof drainage systems, and mechanical and electrical systems which MUST remain.
- .6 Contractor will be responsible for cleaning any areas beyond the area of Work where dust or debris from the demolition has accumulated and will be responsible for the cost of replacing any equipment or material damaged due to inadequate dust barrier protection.
- .7 Rubbish & waste materials resulting from demolition work may be left on site overnight only if stored in steel garbage container of appropriate size with spring loaded lockable closure doors. Position container to Owner's approval & remove or empty same on regular basis to prevent overfilling. Pay all costs related to rental of container & transportation to dump or authorized landfill site. Pay actual dumping charges at dump or authorized landfill site.

PART 2: PRODUCTS

2.1. ITEMS TO BE REMOVED/RELOCATED BY OWNER (NIC)

- .1 Owner, using his own personnel, may remove & relocate following existing materials or equipment:
 - .1 all loose furniture & equipment such as tables, desks, chairs, files, photocopiers, stored paper supplies, books, etc.
 - .2 all audio/visual equipment such as overhead projectors, projection screens, computers, etc.
- .2 There may be some overlap between Owner's removal & relocation work & commencement of work of this contract. Successful Contractor shall be expected to cooperate fully with Owner if such overlap occurs.

2.2. ITEMS OR MATERIALS RESULTING FROM DEMOLITION

- .1 Except for items noted on the Drawings, all other materials & equipment removed by this Section shall become property of this Subcontractor who shall become responsible for removing them completely from site.
- .2 Prior to commencement of demolition work however, this Subcontractor shall submit to Owner complete written list of materials & /or equipment to be removed from demolition work areas. Owner shall have right to request, in addition to items indicated above, that additional items on this list be turned over to him for his use. Owner shall reply in writing in this regard. Owner recognizes that adjustments to Tender Price may be sought by Subcontractor for such added requests.

- .3 Items noted to be turned over to the Owner are to be delivered to the Owner at 1170 Highway No. 26, Midhurst, ON by the Contractor.

PART 3: EXECUTION

3.1. GENERAL PROCEDURES

- .1 Select methods of demolition to result in minimum of noise & dust. Dampen surfaces as required during course of demolition to result in minimum of noise & dust generation.
- .2 Restrict traffic in area of demolition work to minimize safety hazards. Clean up on regular basis throughout day to ensure that tracking of dust & staining or blemishing of existing adjacent finishes which are to be maintained does not occur.
- .3 Prevent unplanned movement, settlement, or damage during demolition operations. Provide bracing & shoring required. Carefully remove & lower heavy or large objects.

3.2. PREPARATION OF EXISTING FLOOR SUBSTRATE

- .1 At areas where existing floor finish materials are to be removed thereby exposing existing concrete substrate, this Subcontractor shall be responsible for cleaning & preparing existing concrete substrate ready for application of new floor finish materials.
- .2 Include all costs for labour, solvents, acids, pneumatic scalers, grinders, scarifier, etc as required to completely remove residual adhesive left on concrete substrate (after removal of existing floor finish materials) such that new floor finish materials can be successfully applied. Coordinate with other trades to ensure that solvents used in preparation work are compatible with adhesives to be used in applying new floor finish materials.

3.3. CLEAN -UP

- .1 Clean up in accordance with Section 01000, General Instructions.
- .2 Dispose of the removed material from the site promptly.
- .3 Waste Management Disposal Company must be approved and licensed by the Ministry of Environment for transportation and disposal of all site and construction related materials.
- .4 Transportation and disposal of all materials must meet Ministry of Environment guidelines.
- .5 Contractors are required to submit copies of all Bills of Lading from disposal facilities and transfer stations to the Consultant as proof of compliance.

3.4. HAZARDOUS MATERIALS

- .1 Comply with the requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials in accordance with Section 01060 – Regulatory Requirements.

END OF DEMOLITION & REMOVAL

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable Sections of Division 1

1.2. DESCRIPTION

- .1 Related Work Specified Elsewhere:
 - .1 Quality Control: Section 01400
 - .2 Excavating & rough grading for work under this Section: Section 02200.

1.3. QUALITY ASSURANCE

- .1 Materials & installation shall be subject to approval by independent Testing & Inspection Company appointed and paid for by the Owner. Provide representative samples of materials as may be required by Testing & Inspection Company at no additional cost to Owner.

1.4. REQUIREMENTS OF REGULATORY AGENCIES

- .1 Contact public utilities, municipal departments & other governing agencies having jurisdiction over work to be performed by this Section. Conform to all standards, by-laws & regulations of these agencies. Include in Base Bid cost of all submissions, entrance permits, inspections, fees, etc necessary to perform work to approval of these agencies.

1.5. ALLOWABLE TOLERANCES

- .1 Grade granular base courses with surfaces within 12 mm of established elevations and within a tolerance of 12 mm under a 3 m long straightedge.
- .2 Finish asphalt paving with surfaces within 12 mm of established elevations and locations, within 3 mm of other surfaces at junctions, and within a tolerance of 6 mm under a 3 m long straightedge.

1.6. PROTECTION

- .1 Provide all necessary barriers & precautions required during actual application of paving & to control traffic over it after application in order to turn over to Owner in undamaged condition.

1.7. GUARANTEE

- .1 Guarantee asphalt pavement for period of two (2) years from date of Substantial Performance of entire project. Replace defective work at no cost to Owner. Should defects be caused by settlement of trenches made for underground services installed by others prior to asphalt application, this Contractor shall still be responsible. Co-ordinate carefully to ensure that proper trenching & backfilling procedures for these services are followed.

1.8. ENVIRONMENTAL CONDITIONS

- .1 Binder course paving shall only be performed when air temperature is above 2 degrees Celsius & rising. Surface paving course shall only be laid when air temperature is above 7 degrees Celsius & rising.
- .2 Cease paving operations if temperature falls below minimums noted above.

PART 2: MATERIALS

2.1. MATERIALS

- .1 Concrete and Reinforcement: To meet specified requirements of CAN/CSA-A23 .1-09.
- .2 Steel Reinforcement: CAN/CSA-G30.18-09.
- .3 Asphalt Cement: To meet specified requirements of OPSS Form 1101.
- .4 Asphalt Aggregates: Fine and Coarse Aggregate: To meet specified requirements of OPSS Form 1003.
- .5 Granular "A" & "B": Shall meet requirements of Ontario Provincial Standard Specification (OPSS) Form 1010 for Granular "A" and "B". Provide access to source(s) of proposed granular materials to Testing & Inspection Company to allow for sampling and testing. (Refer to Article 1.3 of Section 02200)
- .6 Supply only those materials approved by Inspection & Testing Company for use on this project.

- .7 Joint Painting Material and Tack Coat: Emulsified. asphalt to meet specified requirements of CAN2-16.2-M77, Type 3 Slow Setting (SS-I).
- .8 Line Marking Paint: Alkyd traffic paint to meet specified requirements of CGSB Standard I-GP-74M or white, overlay type, conforming to OPSS requirements, except where special colours are required.
- .9 Expansion Joint Filler: 12 mm asphalt impregnated fibre board.
- .10 Expansion Joint Sealer: Hot poured, rubber asphalt, Sealtight by W.R.Meadows of Canada Ltd.
- .11 Concrete Mix: Design concrete mix in accordance with CAN/CSA-A23.1.-09 of a 35 MPa strength, C-1 Exposure Classification with water reducing and air entraining admixtures and a 0.40 water/cement ratio.
- .12 Welded Wire Mesh Reinforcing: 152x152xMW18.7xMW18.7 (6x6x6/6) welded wire mesh, flat sheets.
- .13 HL3 & HL8 Asphalt: Shall meet requirements of Ontario Provincial Standard Specification (OPSS) Form 1150 for HL3 and HL8 hot laid asphalt.
- .14 Submit to the Consultant for approval, a minimum 2 weeks prior to construction, current mix designs for concrete and asphalt verifying conformance to OPSS requirements. No materials shall be delivered to the project site until the mix designs have been approved.

PART 3: EXECUTION

3.1. PREPARATION

- .1 Inspect trenching work performed by others within areas of work of this Section. Report deficiencies to General Contractor for rectification prior to commencement of work.
- .2 Inspect existing subgrade materials over which new granulars & asphalt are to be placed to ensure that they are stable and compacted to 95% Standard Proctor Density as indicated under Section 02200. Report deficiencies to General Contractor for rectification prior to commencement of work.
- .3 Carefully set out & execute work to lines & levels shown on drawings.

3.2. INSTALLATION

- .1 Pavement Granulars:
 - .1 Spread granular materials in maximum 150 mm layers and shape accurately finish by blading, and roll to cross-section and profile required by Drawings and Specifications. Use 10 ton steel-wheeled roller. Sprinkle water on granulars ahead of compacting machine to aid compaction or reduce dust nuisance, or both.
 - .2 Spread and compact Granular "B" subbase course. Use water as required to ensure compaction to 100% Standard Proctor Density. Granular "B" subbase course shall be minimum thickness per paving schedule after compaction.
 - .3 Repeat above operation with required base course layer of compacted Granular "A".
 - .4 Slope the sub-grade of asphalt paved areas the same as the slope for the finished asphalt surface. The sub-base course, the base course and the asphalt courses shall be the same thickness over the entire paved area.
 - .5 Shape base course at edges of asphalt pavement to form extended shoulder and to allow for thickened asphalt edge band.
 - .6 Ensure positive drainage. Adjust profile to ensure flush match with existing asphalt where entrance driveways meet existing roads.
 - .7 Place subbase and base course aggregates to thickness shown in Article 3.4 of this Section and compact to density of 100% standard Proctor for concrete sidewalks and curbs. Compact with mechanical vibrating compactor.
- .2 Asphalt:
 - .1 Refer carefully to Site Plan drawing for extent of asphalt areas.
 - .2 Asphalt Areas:

- .1 Shall be double layer application unless indicated otherwise, total thickness after compaction per paving schedule, consisting of an initial binder course layer and second surface course layer.
 - .2 All asphalt shall be delivered to site at a sufficient temperature to achieve a minimum of 120 degrees Celsius in the pavement mat after placement and prior to initial rolling.
 - .3 Spread layers of asphalt in thickness required to result in compacted thicknesses called for. Roller shall be power driven weighing not less than 10 ton and with wheels not less than 850mm wide. Eliminate surface irregularities exceeding 10mm under 3000mm straight edge. Use wobbly wheel compactor first, then roll with steel roller and finish by using wobbly wheel compactor again. Tamp inaccessible areas manually using hot tamper to provide one matching uniform surface with no tamper marks showing.
 - .4 Finished applications shall be dense compact surface, uniform and smooth, free of voids, holes and roller marks. All areas of asphalt paving shall drain positively. Low areas which trap water or pockets unable to drain shall be corrected to Consultant's approval.
 - .5 Finish edges neatly where paving abuts building, existing asphalt, concrete curbs or walks. Use straight edges to terminate paving. Asphalt edges not bordered by curbs, walks, or building shall have rolled, bulbous perimeter edges.
 - .6 Compaction of Asphalt Mixtures: Shall be minimum of 92% of the mix's Maximum Relative Density in accordance with OPSS 310.
- .3 Concrete Walks and Curbs:
- .1 Place concrete and reinforcing in accordance with requirements specified in CAN/CSA-A23.1-09.
 - .2 On top of compacted granular base, place wire reinforcing mesh; before pouring concrete, raise mesh 25mm above base. Cut mesh at expansion joints.
 - .3 Provide expansion joints at 4.5 m centers maximum and score at 1.5 m centers, wood float, then broom finish surfaces.
 - .4 Install 12 mm thick pre-molded asphalt impregnated joint filler in expansion joints and between slabs and adjacent structures.
 - .5 Round edges of sidewalk, expansion joints, score joints with edging tool. Bull-nose exposed edge of curbs, match existing profile.
 - .6 Apply curing sealing compound to exposed concrete surfaces.

3.3. FIELD QUALITY CONTROL

- .1 The Contractor shall engage the inspection and testing agency to undertake concrete and asphalt strength tests and soil compaction tests.
- .2 Notify Architect and inspection and testing agency at least seventy-two hours before this work begins.

3.4. PAVING SCHEDULE

- .1 Light Duty Pavement (Play Area / Pedestrian Traffic Only):
 - .1 Sub-Base Course: Granular 'B' - 300 mm
 - .2 Base Course: Granular 'A' - 150 mm
 - .3 Surface Course: Asphalt HL3 - 60 mm.
- .2 Medium-duty Asphalt paving (Car Traffic & Parking Area):
 - .1 Sub-Base Course: Granular 'B' - 400 mm
 - .2 Base Course: Granular 'A' - 150 mm
 - .3 Binder Course: Asphalt HL8 - 50 mm
 - .4 Surface Course: Asphalt HL3 - 40 mm.
- .3 Heavy-duty Asphalt paving (Bus and Fire Route):
 - .1 Sub-Base Course: Granular 'B' - 600 mm
 - .2 Base Course: Granular 'A' - 150 mm
 - .3 Binder Course: Asphalt HL8 - 80 mm

- .4 Surface Course: Asphalt HL3 - 40 mm.
- .4 Concrete Walks and Exterior Slabs:
 - .1 Subbase Course: Granular B – 300 mm
 - .2 Base Course: Granular 'A' - 150 mm
 - .3 Surface Course: Concrete - 100 mm.
- .5 Concrete Curbs:
 - .1 Subbase Course: Granular B – 300 mm
 - .2 Base Course: Granular 'A' - 150 mm
 - .3 Surface Course: Concrete – to detailed design.
- 3.5. CLEAN UP**
 - .1 Upon completion of work, remove all equipment debris and surface materials from site.
 - .2 Clean up in accordance with Section 01700, Contract Close-out and Final Cleaning.

END OF ASPHALT PAVING

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- .1 Section 03300: Cast-in-place Concrete
- .2 Section 03450: Architectural Precast Concrete
- .3 Section 04200: Masonry
- .4 Section 06100: Rough Carpentry
- .5 Section 06200: Finish Carpentry
- .6 Section 09900: Painting

1.3. QUALITY ASSURANCE

- .1 Work of this section to be executed by a firm thoroughly conversant with laws, bylaws and regulations which govern and capable of workmanship of best grade of modern shop and field practice known to recognized manufacturers specializing in this work. Use workmen skilled in work of this section.
- .2 Qualifications of Welders: welding of any ladder, stair and railing component shall be performed by fabricator certified under CIA W47.1-09.
- .3 Comply with applicable requirements of CAN/CSA-S16-09.

1.4. SUBMITTALS

- .1 Shop Drawings: Submit shop drawings in accordance with General Requirements, Section 01340 and Supplementary Conditions.
- .2 Shop drawings for stairs, balustrades, railings and ladders shall bear stamp and signature of a professional engineer registered in Ontario.

1.5. WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, and corrugated cardboard packaging material in appropriate on site bins for recycling in accordance with Waste Management Plan.
- .4 Divert unused metal materials from landfill to metal recycling facility.

PART 2: PRODUCTS

2.1. MATERIALS

- .1 Structural Steel Sections & Steel Plate: ASTM A36 / A36M - 14 & CAN/CSA-G40.21-13 minimum 260W Grade.
- .2 Square steel tube: ASTM A36-14 & CAN/CSA-G40.21-13 minimum 260W Grade.
- .3 Steel pipe: ASTM A53, Type E, Grade A.
- .4 Stainless Steel tubing: ASTM A269.
- .5 Sheet steel: hot dip galvanized, cold rolled, with stretcher level degree of flatness to ASTM A653; zinc coating designation Z275.
- .6 Aluminium extrusions: AA 6063-T5 alloy.
- .7 Prepaint Finish: For galvanized surfaces to be exposed and finish painted, shall be to ASTM D6386 – 16a.
- .8 Galvanizing: Steel specified to be galvanized, except above, ASTM A123 / A123M-15, Zinc (hot-dipped galvanized) coatings on products fabricated from rolled, pressed and forged steel shapes, plates, bars and strips. Galvanize after welding is complete. No welding of galvanized products allowed.
- .9 Welding Materials: CSA W59-13 & CSA W55.3-08 (R2013).

- .10 Primer: CGSB 1-GP-40M.
- .11 Bituminous enamel: alkali resistant asphaltic coating.

2.2. FABRICATION & MANUFACTURING

- .1 General:
 - .1 Fit and assemble work in shop where possible. Execute work according to details and approved shop drawings. Where shop fabrication is not possible, make trial assembly in shop.
 - .2 Do all welding in accordance with requirements of CSA W59-13 & CSA W55.3-08 (R2013).
 - .3 Fit joints and intersecting members accurately. Make work in true planes with adequate fastening.
 - .4 Supply all fastenings, anchors, accessories required for fabrication and erection of work of this section. Such items occurring on or in exterior wall or slab shall be hot dipped galvanized. Make thread dimensions such that nuts and bolts will fit without re-threading or chasing threads.
 - .5 Make exposed metal fastenings and accessories of same material, texture, colour and finish as base metal on which they occur unless otherwise shown or specified. Keep exposed fastenings to absolute minimum evenly spaced and neatly laid out. Make fastenings of permanent type unless otherwise indicated.
 - .6 Close exposed open ends of tubular members with welded on steel plugs.
 - .7 Grind off mill stampings and fill recessed markings on steel components left exposed to view.
- .2 Metal Railings:
 - .1 Definition: the term "railing" shall be taken to mean balustrades, guards, rails and railings of all types.
 - .2 Fabricate railings to conform to applicable OBC requirements, including Item 4.1.10.1 Loads on Guards.
 - .3 Construction: unless otherwise indicated:
 - .1 All **railings** are to be constructed of **stainless steel** unless specifically noted otherwise.
 - .2 Close open ends of tubular members with welded steel plugs.
 - .3 Turn handrails down at exposed open ends.
 - .4 Turn exposed ends of wall rails into wall.
 - .5 Support wall railings at each end and at maximum 1000mm o.c. between wall supports.
 - .6 Tube wall thickness: minimum 2.5mm.
 - .7 At corners, angles and intersections cope or mitre and weld and grind smooth.
 - .8 Pickets shall be solid bars.
- .3 Finishes:
 - .1 Thoroughly clean all ferrous metal in accordance with CGSB 31-GP-404A.
 - .2 Grind smooth sharp projections.
 - .3 Remove oil and grease by solvent cleaning.
 - .4 Apply coatings in the shop and before assembly. Where size permits, galvanize components after assembly.
 - .5 Interior components: shop apply one coat of primer after fabrication except where stainless steel, galvanized or zinc rich paint finish is required.
 - .6 Exterior components to be painted, except where other finish is indicated: Blast clean metal to "Near White Grade" (SSPC-SP-10) and spray apply a coat of zinc rich paint, maximum 3 mils thick.
 - .7 Hot dip galvanize exterior components not scheduled to be painted, components located within exterior building elements, and where so indicated, interior components after fabrication in accord with requirements of ASTM A123 / A123M-15, minimum coating weight 380 g/m2.

- .8 Apply coat of bituminous enamel to contact surfaces of metal components in contact with cementitious materials and dissimilar metals.

PART 3: EXECUTION

3.1. INSPECTION

- .1 Prior to installation of metal fabrications, carefully inspect the installed work of all other trades and verify that all such work is complete to the point that this installation may properly commence.

3.2. PREPARATION

- .1 Check and verify all dimensions upon which the work of this section depends. Fabricators will be responsible for taking their own field dimensions.

3.3. INSTALLATION

- .1 Where items are required to be built into masonry, concrete or other work, supply such items to respective sections at proper schedule time with all anchors, accessories and instructions for building in.
- .2 Build and erect work plumb, true, square, straight, level & accurate to sizes detailed on approved shop drawings, free from distortion or defects detrimental to appearance and performance.
- .3 Insulate metals where necessary to prevent corrosion due to contact between dissimilar metals and between metals and masonry, concrete or plaster. Use bituminous paint, butyl tape, building paper or other approved means.
- .4 After erection and installation, thoroughly clean work and apply field touch-up of same formula as shop coat primer to all damaged or unpainted surface of shop primed material. Work primer well into all joints, crevices, interstices and open spaces.

3.4. PROTECTION

- .1 Protect all materials from damage during storage and during the construction period.
- .2 Any damaged material which cannot be repaired to "as new" condition on site, to be totally removed and replaced at an additional cost to the Owner.

3.5. SCHEDULE

- .1 Supply and install all miscellaneous metal work indicated on drawings and not included in work of other sections. Including but not limited to:
 - .1 Lateral supports for non-load bearing masonry partitions and walls.
 - .2 Galvanized steel anchor bolts, 10mm diameter, 300mm long to secure wood blocking at parapets and walls as detailed.
 - .3 Vanity, bench and millwork counter supports.
 - .4 Steel bollards as detailed on the Drawings.
 - .5 Galvanized bent steel wall guard at gas piping.
 - .6 Galvanized steel roof ladders to access high roof areas as shown on the drawings.
 - .7 Other metal fabrications shown on the Drawings and not specifically covered in other Sections.

END OF MISCELLANEOUS METALS

PART 1: GENERAL

1.1. GENERAL INSTRUCTIONS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 01.

1.2. SUMMARY

- .1 Work Included:
- .2 Fire stopping and smoke seals, excluding those inside sealed mechanical and electrical assemblies (e.g. inside ducts, dampers, bus ducts etc.) Note: Provide fire stopping in cable trays.
- .3 Referenced Sections:
 - .1 Section 01340: Shop Drawings
 - .2 Mechanical and Electrical drawings

1.3. REFERENCES

- .1 Underwriters Laboratories of Canada:
 - .1 List of Equipment and Materials, Building Construction
 - .2 CAN4-S101M, Fire Tests of Building Construction & Materials.
 - .3 CAN4-S102M, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
 - .4 CAN4-S115M, Standard Method of Fire Tests of Fire Stopping Systems.

1.4. QUALITY ASSURANCE

- .1 Work of this section to be executed by a firm thoroughly conversant with laws, bylaws and regulations which govern and capable of workmanship of best grade of modern shop and field practice known to recognized manufacturers specializing in this work. Use workmen skilled in work of this section.

1.5. SUBMITTALS

- .1 Certification:
 - .1 Submit in accordance with Section 01340. Submit fireproofing manufacturer's written certification that the products, systems and assemblies have been installed in accordance with the manufacturer's requirements.
- .2 Shop Drawings:
 - .1 Submit shop drawings for each typical rated assembly of the work of this Section in accordance with Section 01340.
 - .2 In accordance with the minimum requirements indicate the following:
 - .1 Proof of Labeling and Listing the required F, FT, FH and FTH ratings
 - .2 Primers
 - .3 Supports and damming materials
 - .4 Reinforcements, anchorages and fastenings

1.6. SITE CONDITIONS

- .1 Comply with the manufacturer's temperature, relative humidity and substrate moisture content requirements during installation and curing of products.

PART 2: PRODUCTS

2.1. FIRESTOP MATERIALS GENERAL

- .1 Provide products and assemblies listed and certified by ULC in the List of Equipment and Materials, Building Construction. Products and assemblies certified by a Listed testing authority are subject to the approval of the authorities having jurisdiction.
- .2 Provide assemblies tested in accordance with CAN/ULC-S115-05 where possible.
- .3 Provide component products certified under the ULC Label Service.

- .4 Provide accessory products, including forming materials, in accordance with the ULC listed assembly.
- .5 Provide elastomeric fire and smoke seals in the following locations:
 - .1 At openings intended for ease of re-entry, if indicated.
 - .2 At openings around services requiring sound and vibration control, if indicated.
 - .3 At openings required to allow movement such as building joints, control and expansion joints and deflection spaces

2.2. FIRESTOP INSULATION

- .1 Acceptable manufacturers and products:
 - .1 .1 Tremco Ltd.
 - .2 .2 Double AD, Firebarrier
 - .3 .3 Instant Firestop Inc., Type MW
 - .4 .4 M. W McGill and Associates Ltd., Fire-Bloc.
 - .5 .5 Roxul Inc., RXL Safe
- .2 Provide Fire stop insulation compressed to minimum 75% of uncompressed thickness.
- .3 Provide impaling clips at 600mm o.c.
- .4 Provide fire stop insulation continuously.

2.3. FIRESTOP SEALANT AND FIRESTOP FOAM

- .1 As indicated in the applicable ULC assembly.

PART 3: EXECUTION

3.1. GENERAL

- .1 Conform to the requirements of the authorities having jurisdiction.
- .2 Provide fire stopping and smoke seals to maintain the continuity and equivalence of Fire Separations with Fire Resistance Ratings. Assemblies are subject to the approval of the authorities having jurisdiction.

3.2. GENERAL INSTALLATION

- .1 Conform to product manufacturer's printed directions for mixing, work life, and other installation requirements of the fire stopping and smoke seals.
- .2 Provide fire stopping and smoke seals in accordance with the rated assembly design in both horizontal and vertical applications.
- .3 Maintain the continuity and integrity of the air, vapour and thermal seals.
- .4 Coordinate the fire stopping installation to precede the installation of pipe and duct insulation unless the ULC assembly permits insulation to remain.
- .5 Remove non-asbestos pipe and duct insulation unless the ULC assembly permits insulation to remain.
- .6 Provide temporary forming and packing as required by the assembly and remove after fire stop installation unless allowed to remain in accordance with CAN/ULC-S102.
- .7 Tool fire stop sealant neat, smooth, free from ridges, wrinkles, sags, air pockets and embedded impurities.
- .8 Remove droppings and excess materials as the Work progresses and before materials achieve initial set.
- .9 Ensure all fire separations, being relied upon, are fire-stopped at the end of each day's work

3.3. SCHEDULE

- .1 Provide fire stopping and smoke seals for:
 - .1 Penetrations through horizontal and vertical fire separations,
 - .2 Top of fire separation walls and partitions,
 - .3 Intersection of masonry and gypsum board fire separations,
 - .4 Control and sway joints in masonry and gypsum board fire separations,
 - .5 At the juncture of floor assemblies and exterior walls,
 - .6 Openings and sleeves installed for future use through fire separations,

- .7 Around mechanical and electrical assemblies penetrating fire assemblies (apart from work included in Div. 15 and 16)

3.4. CLEANING

- .1 Remove excess materials and debris and clean adjacent surfaces immediately after application.
- .2 Remove temporary dams after fire stopping materials have set.

END OF FIRESTOPPING

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- .1 See all other sections of specifications for extent of caulking provided by those sections.

1.3. REFERENCES

- .1 Sealants acceptable for use on this project must be listed on CGSB Qualified Products List issued by CGSB Qualifications Board for Joint Sealant.
- .2 CAN/CGSB-19.24 - Multi-Component, chemical curing sealing compound.
- .3 CAN/CGSB-19.13 - One Component, elastomeric, chemical curing sealing compound.

1.4. SUBMITTALS

- .1 Samples: Submit sample to Consultant for approval of each type of sealing compound proposed for use on this project together with recommended primers and joint fillers proposed for use. Submit standard available colours for selection by Consultant. Make submissions and gain approvals in sufficient advance time to ensure that materials and colours selected are ordered and on site when required.
- .2 Guarantee: Submit to Consultant written guarantee covering all caulking performed by this section against defects in materials and workmanship. Guarantee shall be effective for period of five (5) years from date of Substantial Performance of entire project.

1.5. ENVIRONMENTAL REQUIREMENTS

- .1 Conform to manufacturer's recommended temperatures, relative humidity and substrate moisture content for application and curing of sealants including special conditions governing use.
- .2 Ventilate area of work as directed by Consultant, by use of approved portable supply and exhaust fans.
- .3 Materials must be stored at a minimum of 68°F (20°C) immediately prior to application.
- .4 Caulking must be carried out when ambient temperature is above 32°F (0°C).

1.6. QUALITY ASSURANCE

- .1 Work of this section shall be performed by fully trained personnel specializing in application of caulking materials.

PART 2: PRODUCTS

2.1. MATERIALS

- .1 Sealing Compound Type A: Multi-component, chemical curing, conforming to CAN/CGSB-19.24-M90, Type 2 Class B, ASTM C 920 Type M, Grade NS, Class 50, Use T, I, M, A and O such as "Dymeric 240" by Tremco.
- .2 Sealing Compound Type B: Mildew resistant, conforming to CAN/CGSB-19.13-M87, ASTM C 920 Type S, Grade NS, use NT, G, A and O such as "Tremsil 200" containing fungicide by Tremco.
- .3 Colours of Sealants: as selected by the Consultant unless otherwise specified, normally to match the predominant material to which sealant is applied.
- .4 Joint Filler / Backer Rod: Polyethylene foam rope, closed cell type circular cross section. Must be 1/8 in. (3 mm) larger than joint width.
- .5 Bond Breaker Tape: closed cell polyethylene bond breaker tape, self-adhering one side.
- .6 Joint Cleaner / Primer: Non-corrosive and non-staining type, compatible with joint forming materials and sealant as recommended by sealant manufacturer.

PART 3: EXECUTION

3.1. PROTECTION

- .1 Protect installed work of other trades from staining or contamination.

3.2. PREPARATION

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backer rod and sealant.
- .2 Clean joints and spaces to be caulked to ensure that they are dry and free from dust, loose mortar, oil, grease and other foreign material. Clean ferrous metal of all rust, mill scale and foreign materials by wire brushing, grinding or sanding. Wipe all metal surfaces to be caulked with cellulose sponges or clean rags soaked with joint cleaner and wipe dry with clean cloth.
- .3 Joints in surfaces to be painted shall receive sealing compound before surfaces are painted. Where surfaces to be caulked are primed in shop, prior to caulking check to ensure prime painting and caulking materials are compatible.
- .4 Do not apply sealant 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.
- .5 Ensure joint surfaces are dry and frost free.

3.3. PRIMING

- .1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.4. BACKER ROD

- .1 Apply bond breaker tape where required to manufacturer's instructions.
- .2 Install joint filler in joints 6 mm and more in width. Roll rope filler into joint, do not stretch or braid. Install bond breaker in joints less than 6 mm in width.
- .3 Install backer rod to achieve correct joint depth and shape, with approximately 30% compression.

3.5. APPLICATION

- .1 Apply sealing compounds using air or hand operated guns fitted with suitable nozzles and equipment approved by compound manufacturer. Apply in strict accordance with manufacturers' directions and recommendations.
- .2 Mask edges of joint where irregular surface or sensitive joint border exists to provide a neat joint.
- .3 Apply sealing compounds under pressure in manner that ensures good adhesion to sides of joints. Form surfaces smooth, free from ridges, wrinkles, air pockets and embedded foreign matter.
- .4 Tool exposed surfaces before skinning begins to give slightly concave shape.
- .5 Remove excess compound promptly as work progresses and upon completion.
- .6 Apply sealants in accordance with the following table:

JOINT WIDTH	SEALANT DEPTH
5 MM	5 MM
10 MM	7 MM
15 MM	10 MM
20 MM	12 MM
25 MM	15 MM

- .7 Where recommended by sealant manufacturer, vent exterior joints in accord with such recommendations.

3.6. CURING

- .1 Cure sealant in accordance with the manufacturer's requirements.
.2 Do not cover up sealants until proper curing has taken place.

3.7. 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 bonding tape after initial set of sealant.
.4 Upon completion remove debris, tools, equipment and materials and clean up in accordance with Section 01000, General Instructions.

3.8. SCHEDULE

- .1 Using sealing compounds specified in following locations:
.1 Type A: Generally for exterior use and for interior use where surfaces will be painted, such as between exterior metal door frames and wall, at exterior control joints, interior control joints, interior window and door frames and at all other locations not covered by Type B.
.2 Type B: Generally for interior use where surfaces won't be painted, such as around fixtures, at sink/counter/wall junctions, etc.
.2 Apply sealant at the junction of the following interior finish materials:
.1 Between dissimilar materials in exposed locations except where specifically indicated otherwise:
.1 Concrete to concrete.
.2 Concrete to metal.
.3 Concrete to masonry.
.4 Masonry to masonry.
.5 Masonry to metal.
.6 Masonry to wood.
.7 Metal to metal.
.8 Metal to wood.
.9 Gypsum board to concrete.
.10 Gypsum board to metal.
.11 Gypsum board to masonry.
.3 Apply sealant at all connections with roofing and sheet metal work.
.4 Caulk control, construction and expansion joints unless otherwise indicated.
.5 Caulk both sides of deflection space between top of **non-fire rated** masonry walls and underside of structure above.
.6 Caulk around ducts, pipes and conduit penetrating exterior and interior non-fire rated masonry and concrete walls.
.7 Caulk joints between steel and masonry.

- .8 Caulk joints between hollow metal and aluminium door, window and screen frames and adjacent surfaces, including floor surfaces.
- .9 Caulk joints between millwork and adjacent walls.
- .10 Caulk joints between plumbing fixtures and adjacent surfaces.

END OF SEALANTS

PART 1: GENERAL

1.1. SCOPE OF WORK

- .1 The Work of this Section includes the Supply, Installation and Inspection of accessories and finishing hardware described in this section, the hardware schedule appended to this Section and as noted on the drawings.
- .2 Hardware Supply:
 - .1 Supply is by a specialist Hardware Supplier as pre-qualified herein for the following scope:
 - .1 Supply of door hardware for exterior steel doors,
 - .2 Supply of door hardware for any exterior and interior aluminium doors,
 - .3 Supply of door hardware for interior steel and wood doors,
 - .4 Supply of locksets to the millwork subcontractor for millwork closet units,
 - .5 Supervision of door hardware installation (Hardware Consultant),
 - .6 Supply and installation of automatic operators,
 - .7 Supply and installation of all low voltage wiring. (Conduit provided by Division 26.)
- .3 Hardware Installation:
 - .1 Installation by the General Contractor or by qualified personnel appointed by the General Contractor: Installation of hardware for interior wood and steel doors and exterior steel doors and coordination of installation of automatic operators with Division 26.
 - .2 Installation of locksets at teacher's closets and tall cabinets by the millwork subcontractor.
 - .3 Installation of any aluminium door hardware by the aluminium door supplier.
- .4 Hardware Inspection:
 - .1 Independent Inspection of installed door hardware by Hardware Inspector appointed by the Owner and paid through the Cash Allowance Section 01020.

1.2. RELATED SECTIONS

- .1 Section 01020: Cash Allowance to cover the cost of an independent hardware inspection.
- .2 Section 06200: Finish Carpentry
- .3 Section 08100: Hollow Metal Doors and Frames
- .4 Section 08200: Wood Doors
- .5 Division 26: Conduit for low voltage wiring, electric power supply for power door operators and hold-open devices.

1.3. REFERENCES

- .1 CAN/CGSB -69.17 Bored and Pre-assembled Locks and Latches.
- .2 CAN/CGSB -69.18/ANSI/BHMA-A156.1 Butts and Hinges
- .3 CAN/CGSB -69.19/ANSI/BHMA-A156.3 Exit Devices.
- .4 CAN/CGSB -69.20/ANSI/BHMA-A156.4 Door Controls (Closers).
- .5 CAN/CGSB -69.29/ANSI/BHMA-A156.13 Mortise Locks & Latches.
- .6 CAN/CGSB -69.34/ANSI/BHMA-A156.18 Materials & Finishes.
- .7 Canadian Steel Door Manufacturers Association (CSDMA), Recommended Dimensional Standards for Commercial Steel Doors and Frames.
- .8 NFPA 80 Standard for Fire Doors and Other Opening Protectives.

1.4. REQUIREMENTS OF REGULATORY AGENCIES

- .1 Hardware for doors in fire separations and exit doors shall be certified by a Canadian Certification Organization accredited by the Standards Council of Canada.

1.5. SUBMITTALS

- .1 Door Hardware List: supply one (1) digital copy of a detailed final door hardware list prepared by a qualified Architectural Hardware Consultant.
 - .1 List items to be furnished and delivered under this Section.
 - .2 Indicate door hardware proposed, identifying each item by manufacturer name, model number, material, function, finish, location and other pertinent information. List shall be in same format as that bound in this specification.
- .2 Templates: Supply templates to installers and fabricators as required for proper location and installation of hardware.
- .3 Closeout Submittals: Provide maintenance, operating, and installation instructions for each type of door hardware for incorporation into Operating and Maintenance Manual per Section 01700. Include the following information:
 - .1 Name of hardware distributor, address and contact name,
 - .2 Copy of final "as-built" finish hardware schedule,
 - .3 Wiring diagrams, elevations, risers, point-to-point,
 - .4 Maintenance instructions for each product,
 - .5 Catalogue cut sheets and product specifications for each product,
 - .6 Parts list for each product,
 - .7 Installation instructions and templates for each product.

1.6. MAINTENANCE

- .1 Supply tools necessary for maintenance and adjustment of equipment as required. Deliver to Owner's place of storage.
- .2 Provide 1 complete set of wrenches and fastening tools for locksets and closers.

1.7. DELIVERY, STORAGE AND HANDLING

- .1 Package hardware and label with description of contents and installation location. Refer on labels to hardware list designation, and with door number when applicable.
- .2 Store hardware in a locked, clean and dry area and in a manner to allow easy access to each item group as needed, without disruption of storage arrangement. Provide written confirmation to the Consultant that the storage area is adequate and secure.

1.8. FIELD QUALITY CONTROL

- .1 Architectural Hardware Consultant:
 - .1 The hardware supplier shall have in its' employ an Architectural Hardware Consultant who is a current member of the Dorr and Hardware Institute, and who shall be made available for consultation during the course of construction at no additional charge to the Owner.
 - .2 The Architectural Hardware Consultant shall supervise hardware installation, provide assistance to the hardware installer, and carry out inspections and provide written certification of the finished door hardware installation.
 - .3 Allow for a minimum of three (3) inspections during installation and one (1) final inspection.
- .2 Hardware supplier to organize with the manufacturer a pre-installation seminar with the contractor/installer. At this meeting the contractor/installer will be shown proper installation methods for the products to be used on the project.
- .3 Hardware supplier shall perform bi-monthly on site inspections during hardware installation and provide inspection reports listing progress of work, unacceptable work and corrective measures. The contractor/installer shall repair or replace as directed by the consultant.
- .4 Upon completion of finish hardware installation, the hardware supplier and the contractor/installer shall inspect the work and provide a list of all hardware deficiencies. The hardware supplier shall re-inspect when notified by the contractor/installer as to the clearing of deficiencies. The hardware supplier and the contractor/installer shall certify in writing that all hardware items and their installation are in accordance with all requirements of the contract documents. Final inspection must ensure all hardware items operate as per

manufacturer requirements. Co-ordinate inspections with manufacturer's representative as required to establish warranties.

- .5 Installers must have a minimum of five (5) years' experience in installation of hardware. Provide verification of installer's qualification to Consultant for approval. Installers to attend review meetings with Hardware Supplier.

1.9. WARRANTY

- .1 Submit a warranty for door hardware on a form approved by the Owner and in accordance with the Contract Requirements, but for a period of three (3) years. Where a manufacturer's standard warranty period exceeds three years it shall prevail.
- .2 Warranty shall cover the labour and materials necessary to repair both products and installation found to be faulty during the warranty period, including damage to doors caused by product failure or faulty installation, for the entire period and shall be submitted by the hardware installer.
- .3 Warranties shall commence on the date of Substantial Performance of the Contract.

PART 2: PRODUCTS

2.1. GENERAL

- .1 Hardware supplier shall thoroughly review the door hardware list appended to this Section, the architectural door and hardware schedules and the drawings to ensure that listed hardware is suitable by dimension and function for intended purpose prior to preparing the final door hardware list. Inform Consultant of discrepancies.
- .2 **The Base Bid shall be based only on the manufacturers and products specified and listed in the Door Hardware List appended to this Section.** An Alternate Price may be submitted using approved alternate products only.
- .3 Use one manufacturer's products for similar items which shall have consistent colour and finish throughout Project.
- .4 Supply door hardware by one of the following companies, approved to supply or distribute specified products:
 - .1 Approved Hardware Suppliers:
 - .1 Wilson Hollow Metal Sales, Mississauga 905-564-2112
 - .2 Commercial Doors & Hardware, Toronto 416-749-7231
 - .3 Great Lakes Architectural Hardware, Hamilton 905-383-3334
 - .4 Regional Doors & Hardware, St. Catharines, 905-684-8161
 - .5 Upper Canada Specialty Hardware, Markham, 905-940-8358
 - .6 Remac Door and Hardware, Mississauga, 905-677-3100
 - .7 Allmar Distributors, Concord, 905-737-4700
 - .8 Group 87, Burlington, 905-639-4676
 - .9 Brunet Goulard Les Agenci, Nepean, 514-392-2555.
- .5 Keying:
 - .1 Provide permanent **7-pin removable core cylinders by Best Locks. Supply Best permanent cores.**
 - .2 Permanent cores are to be turned over to the Owner who will complete final coring.
 - .3 Provide **brass only** construction cores for locks and cylinders for use during construction. Credit the Owner for return of construction cores.

2.2. ACCEPTABLE PRODUCTS

- .1 **Products shall be those listed in the Door Hardware List appended to this Section.**
- .2 Fastenings:
 - .1 Provide screws, bolts, expansion shields and other fastening devices required for the satisfactory installation and operation of hardware, and as recommended by the hardware manufacturers for long life under hard use.
 - .2 Exposed screws for installing hardware shall have Phillips or Robertson heads.
 - .3 Exposed fastening devices shall match material and finish of hardware.

- .4 Where a pull is scheduled on one side of a door and a push plate on the other, provide fastening devices so that the pull can be installed from the reverse side and the push plate will cover the fasteners.
- .5 Install door closers with through-bolt mounting.

PART 3: EXECUTION

3.1. PREPARATION

- .1 Provide instructions required for preparation of doors and frames, including strike heights listed in table below, to the appropriate fabricators.
- .2 Work of this Section shall include assistance and supervision of installation when requested, and as otherwise provided by the supplier, to ensure correct installation.

3.2. EXAMINATION

- .1 Ensure that doors and frames are properly prepared and reinforced to receive finish hardware prior to installation.
- .2 Ensure that door frames and finished floor are plumb and level to permit proper engagement and operation of hardware.
- .3 Submit to Consultant and Contractor, in writing, a list of any deficiencies found during examination. Deficiencies are to be corrected prior to installation of hardware.

3.3. INSTALLATION

- .1 Power door operators to be installed by hardware supplier. Provide all low voltage control wiring to push button locations, exit device release. 102mm x 120mm back boxes and all conduit to be provided by Division 26 (Electrical Contractor).
- .2 Locate and mount hardware at standard location dimensions in accordance with CSDFMA, Canadian Metric Guide for Steel Doors and Frames (Modular Construction), and as indicated in the following table:

HARDWARE MOUNTING HEIGHTS	
HARDWARE ITEM	DIMENSION ABOVE FINISHED FLOOR
LOCKSET or LATCHSET	1024mm to Centreline of Strike
DEADLOCK	1200mm to Centreline of Cylinder
EXIT DEVICE	950 to Centreline of Strike
PUSH PLATE / DOOR PULLS	1060mm to Centreline of Plate or Pull

- .3 Accurately locate and adjust hardware to meet manufacturer's instructions. Use special tools and jigs as recommended.
- .4 Locate door stops to contact doors 75 mm from latch edge.
- .5 Install hardware and trim square and plumb to doors.
- .6 Replace wrappings for hardware provided by manufacturer after installation.
- .7 Safeguard keys to keep them out of unauthorized hands, tag them with door number, and deliver them to person designated by Architect at building completion.

3.4. ADJUSTING & VERIFICATION

- .1 Verify under work of this Section that installed hardware functions properly and adjust accordingly to ensure satisfactory operation.
- .2 Adjust hardware so that latches and locks operate smoothly and without binding, and closers act positively with the least possible resistance in use. Lubricate hardware if required by manufacturer's instructions.
- .3 Inspect fire rated openings and verify that hardware is in compliance with NFPA 80 requirements.
- .4 In Owner's presence, test access control system and electrified hardware devices to verify proper operation. Verify electric door release operation upon activation of the fire alarm system. Obtain Owner sign-off on verification and submit copy to Consultant.

- .5 Perform a minimum of bi-monthly on-site inspections during hardware installation and provide reports listing the progress of the work, unacceptable work and corrective measures. Repair or replace defective work as directed by the Consultant.
- .6 Before completion of the work but after the hardware has been installed, submit a certificate to the Consultant verifying that a final inspection of the hardware has been made by a technician from the manufacturer and the Architectural Hardware Consultant.
- .7 Coordinate with the Owner's Hardware Inspector and perform a final inspection of the work. Correct any deficiencies noted by the Hardware Inspector.

3.5. CLEANING

- .1 Remove wrappings and protection from hardware at completion of the Project and clean hardware in accordance with manufacturer's instructions.

3.6. FINAL DOCUMENTATION

- .1 The hardware supplier shall provide hardware close-out documentation to the Contractor for inclusion in maintenance manuals.

END OF FINISH HARDWARE

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Read and conform to:
 - .1 The Sections of Division 1.

1.2. ROOM SCHEDULE INDEX

- .1 General Finish Notes and Materials Legend: below (2 pages)
- .2 Room Finish Schedule: appended to this Section

1.3. GENERAL FINISH NOTES

- .1 In addition to paint finishing indicated in the Room Finish Schedule, paint shall be applied to other materials as described in Section 09900 and as noted on the Drawings.
- .2 Refer to Door Schedule, Specifications, Drawings and Details for special conditions not indicated on this Schedule.
- .3 The ceiling material column on the Schedule indicates the material and the finish on it, if any. Where no ceiling is indicated, the finish indicated is to be applied to the underside of the structure above, including all framing members and exposed services.
- .4 Factory applied finishes and colours for manufactured items and materials such as louvers, aluminium window frames, prefinished metal panels and flashings and washroom partitions and accessories are stated in the relevant section of the Specification. Colours not specified will be chosen by the Consultant from samples submitted by the Contractor and from the Manufacturer's standard range unless specified otherwise.
- .5 All interior and exterior ferrous metal work exposed to view are to be painted. These items shall include, but are not limited to, the following: steel stairs, railings, guard rails, ladders, door frames, lintels, bollards, corner guards, gratings, pipe protection, shelf angles and bench supports.
- .6 The undersides of steel stairs are to be considered "ceilings" and painted accordingly. The undersides of steel portion of steel stairs and landings are to be painted the same colour as the remainder of the stair. The soffits are to be considered "ceilings" and painted accordingly.
- .7 Concrete floors that are scheduled to receive finishes such as waterproofing, rubber flooring, terrazzo, epoxy and resilient tile are not to be sealed. All others concrete floors are to be sealed.
- .8 All exterior ventilation hoods, ducts and piping are to be painted/repainted. Colour to be custom colour, Stelco 10,000 Series as selected by the Consultant.
- .9 All poured concrete walls are to be constructed in preparation for paint finish, unless noted to receive sandblasted finish. At locations where concrete walls meet adjacent walls of another material such as block or gypsum board, ensure that joints are straight and true to receive caulking and finish.
- .10 Refer to drawings for extent of gypsum board bulkheads and ceilings. All bulkheads are to receive paint finish to match adjacent ceiling unless noted otherwise.
- .11 All recessed convectors, grilles, access panels, wall fin covers, exposed pipes, hangers, guardrails, ladders and miscellaneous metal other than specialty finishes or baked enamel finishes shall receive painted finish.
- .12 Doors to be finished per Door Schedule.

1.4. MATERIALS LEGEND:

AL	Aluminium
ATC	Acoustic Tile Ceiling
CMU	Concrete Block
BRK	Brick
CAR	Carpet
CONC	Concrete
CT	Ceramic Tile
EJC	Expansion Joint Cover

EXIST	Existing Condition
EXP	Exposed
EPC	Exposed pre-cast concrete
FF	Factory Finish
GB	Gypsum Board
GBS	Gypsum Board Sheathing
HBGC	High Build Glazed Coating (Epoxy)
HM	Hollow Metal
HMP	Hollow Metal Panel
IAP	Insulated Aluminium Panel
IMP	Insulated Metal Panel
PT	Paint
PLAM	Plastic Laminate
RB	Resilient Base
RCP	Reflected Ceiling Plan
SS	Stainless Steel
STR	Structure
SVS	Sheet Vinyl Safety Flooring
VAR	Varnish
VCT	Vinyl Composition Tile
WD	Wood

END OF ROOM FINISH SCHEDULE

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Read and conform to:
 - .1 The Sections of Division 1.

1.2. SCOPE OF WORK

- .1 Work Included:
 - .1 New gypsum board partitions, ceilings and bulkheads.
 - .2 Miscellaneous metal framing indicated on the drawings.

1.3. RELATED WORK

- .1 Section 07265: air barrier
- .2 Section 07200: thermal insulation
- .3 Section 07270: fire stopping
- .4 Section 07900: caulking (except concealed acoustic caulking)
- .5 Section 08100: supply of steel door frames
- .6 Section 09900: painting
- .7 Divisions 15 & 16: supply of access doors

1.4. FIRE PROTECTION REQUIREMENTS

- .1 Provide fire rated gypsum board components and assemblies as indicated on the Drawings.
- .2 Comply with the requirements of Section 01060.
- .3 Where fire hose cabinets, electrical panels or other fixtures or equipment are recessed into fire rated gypsum board partitions, provide fire rated backing to maintain the required fire rating.
- .4 Protect recessed fixtures in fire rated gypsum board ceilings in accordance with fire rated assembly design report and/or as indicated on the Drawings.
- .5 Gypsum bulkheads / partitions in ceiling spaces above fire rated glazed screens, doors or other elements shall have same fire rating as element over which they occur.

1.5. REFERENCES

- .1 Canadian Standards Association (CSA):
 - .1 A82.27-M91: Gypsum Board Products
 - .2 A82.31-M91: Gypsum Board Application

1.6. PRODUCT HANDLING AND STORAGE

- .1 Handle gypsum board panels to prevent damaged edges.
- .2 Store materials in dry place so as to preserve their quality and fitness for work.

1.7. JOB CONDITIONS

- .1 Install and finish gypsum board when ambient temperature is between 14 and 22 deg C. maintain this temperature range for 24 hours before and during application and until joint cement and adhesives are fully cured.
- .2 Apply gypsum board after building has been fully enclosed. Ensure that work to be concealed by gypsum board has been installed, tested, inspected and approved before starting work.

1.8. QUALITY ASSURANCE

- .1 Applicator Qualifications:
 - .1 Provide the work of this Section, executed by competent installers with minimum of 5 years experience in the application of products, systems and assemblies specified.

PART 2: PRODUCTS

2.1. FRAMING AND SUSPENSION COMPONENTS

- .1 Metal framing:
 - .1 Acceptable manufacturers include:

- .1 Canadian Gypsum Company Ltd. (CGC)
- .2 G-P Gypsum Corporation (Gyproc)
- .3 Bailey Metal Products (BMP)
- .2 Metal studs and runners: 25 gauge thick galvanized steel.
- .3 Metal furring channels: 19mm galvanized steel hat shaped channels.

2.2. GYPSUM BOARD (GB) / GYPSUM BOARD SHEATHING (GB SHEATHING)

- .1 Acceptable manufacturers include:
 - .1 Canadian Gypsum Company Ltd.
 - .2 Domtar Construction Materials Ltd.
 - .3 Westroc Industries Ltd.
 - .4 G-P Gypsum Corporation.
- .2 Conform to CSA A82.27 –M1997 for gypsum board products.
- .3 **Gypsum board:** Provide 16mm thick **Type 'X' FIRE RATED** with tapered edges unless otherwise noted.
- .4 **Gypsum Board Sheathing:** 13mm Dens-Glass Gold or 16mm Dens-Glass Gold, fireguard by G-P Gypsum for fire-rated applications.

2.3. ACCESSORIES

- .1 Screws: corrosion-resistant drywall screws as recommended by gypsum board manufacturer.
- .2 Adhesive: CGC Durabond Compound or similar by other acceptable manufacturers.
- .3 Joint treatment for gypsum board: as recommended for the various applications by gypsum board manufacturer. Adhesive at all exterior applications.

2.4. TRIM ACCESSORIES

- .1 Soffit Vent: Model 'SV' Continuous Aluminium Soffit Vent by Stockton Products, PCS 625-200 by Flannery, Inc..
- .2 Corner bead: CGC Dur-a-Bead or BMP D-100.
- .3 Metal trim: CGC No.200-A or BMP D-4411 for "J" Mould. Do not provide "J" Mould unless specifically noted on the Drawings as 'Exposed "J" Mould'.

2.5. ACOUSTICAL MATERIALS

- .1 Isolators: Neoprene type, providing nominal deflection of minimum 6 mm under load of ceiling: Mason WHD by Vibrasonic or equivalent product by BVA or CDM type by Acoutherm.
- .2 Acoustic Insulation inside partitions and above ceilings: acoustic batt insulation per Section 07200.
- .3 Caulking: to CAN/CGSB-19.21-M87: Acoustical Sealant by Tremco, or CGC Acoustical Sealant.

PART 3: EXECUTION

3.1. METAL FRAMING

- .1 General:
 - .1 Framing and furring indicated on the Drawings is schematic and is not to be considered exact or complete. Location and spacing of members, bracing, supports and securement shall be in accord with referenced standards as required to provide complete and finished work.
 - .2 Comply with the recommendations of the CGC Steel Framed Drywall Systems folder 09260-1 E for metal stud partition detailing.
 - .3 Neatly frame around recessed fixtures and openings.
 - .4 Co-ordinate erection of framing with Divisions 15 and 16 to determine openings required. Neatly frame around services.
 - .5 Provide additional studs or furring channels secured between studs for attachment and support of the following:
 - .1 Access panels

- .2 Miscellaneous specialties
- .3 Fitments and fixtures
- .4 Equipment
- .2 Partitions:
 - .1 Unless specified or shown otherwise, extend steel studs to underside of structure above.
 - .2 Provide partition tracks at floor and underside of ceiling or structure above. Align accurately. Secure to supporting structure at 610 mm o.c. Layout to partition layout.
 - .3 Place studs vertically at 400mm o.c. unless otherwise specified, not more than 50mm from abutting walls, and at each side of openings and corners. Position studs in tracks. Cross brace studs as required to provide rigid installation.
 - .4 Stiffen partitions over 2400 mm in height at maximum 1500 mm with at least one 19 mm horizontal bracing channel extending full length of partition.
 - .5 Provide slip joint at top of partitions to accommodate deflection of structure without causing damage to partition.
 - .6 Provide double boxed studs at each side of openings to extend in one piece from floor to underside of structure above.
 - .7 Do not secure studs to exterior window framing, or to the ceiling grid members.
- .3 Metal Furring:
 - .1 Erect furring in accordance with manufacturer's directions and as specified herein.
 - .2 Provide furring rigid, secure, square, level or plumb, framed and erected to maintain the finish dimensions and contours indicated.
 - .3 Furr around ducts, pipes, and dropped beams occurring in finished areas, and for vertical drywall breaks within or at termination of ceilings.
 - .4 Provide metal furring channels fastened to the masonry or concrete surfaces in parallel rows at 400mm o.c. unless gypsum board is indicated to be adhered directly to masonry or concrete surfaces. Shim metal furring channels to provide a level surface.
- .4 Ceilings and Soffits:
 - .1 Erect suspension and furring system level with a maximum tolerance of +/- 3 mm over 3000 mm length.
 - .2 Suspension system shall support grillage independent of walls, columns, pipe and ducts. Space hangers at maximum 1220 mm o.c. along rough furring members and not more than 150 mm from ends. Do not place hangers in front of access panels.
 - .3 Space rough furring members at maximum 915 mm and not more than 150 mm from perimeter walls.
 - .4 Space furring channels transverse to runner channels at maximum 610 mm o.c. except at exterior soffits, and secure to each support with clip or saddle tie with 2 loops of tie wire. Install furring channels so as not to contact perimeter walls.
 - .5 Where ductwork, piping or other elements within ceiling spaces interfere with direct suspension of ceiling from structure, install additional framing securely fastened to main structure to accommodate proper hanging of ceiling.
 - .6 At exterior soffits install furring members at maximum 400 mm o.c. Suspend soffit framing with metal studs and brace system to withstand positive and negative wind forces without detrimental effects. Fasten furring members to surrounding walls. Install gypsum board sheathing, tape and finish with adhesive.
- .5 Bulkheads, coves and furring
 - .1 Frame to profiles shown, rigid, square, true to line and securely fastened to supporting building elements.
 - .2 Space furring members to receive gypsum board at maximum 610 mm o.c.
 - .3 Provide rough framing and bracing as required to ensure stability and accuracy of the work.
 - .4 Where indicated, provide resilient furring channels, spaced at maximum 610 mm o.c.

3.2. GYPSUM BOARD APPLICATION

- .1 Provide gypsum board in accordance with manufacturer's written installation instructions and CSA A82.31-M.
- .2 Use Type 'X' gypsum board at fire rated elements.
- .3 Use Gypsum Board Sheathing at all exterior applications.
- .4 **Provide metal trim at junctions with all dissimilar materials.** Stop gypsum board 6 mm from abutting construction at dissimilar materials and finish floors. Provide reveals at junctions with dissimilar materials where indicated.
- .5 Provide finished work plumb, level and true, free from perceptible waves or ridges and square with adjoining work.
- .6 Cut and fit gypsum board to accommodate or fit around other parts of the Work. Provide the work of this Section accurately and neatly.
- .7 Butt gypsum board sheets together in moderate contact. Do not force into place. Place tapered or wrapped edges next to one another.
- .8 Provide gypsum board perpendicular to framing and in lengths that will span ceilings and walls without creating end (butt) joints. If butt joints do occur stagger and locate them as far from the centre of walls and ceilings as possible. Accurately fit exposed butt joints together and make edges smooth.
- .9 Support ends and edges on framing.
- .10 Fasten gypsum board to metal furring and metal studs with screws.

3.3. METAL TRIM AND ACCESSORIES

- .1 Provide metal trim casing beads at reveals; at ceiling - wall intersections and partition perimeters; and at the intersection of dissimilar constructions such as gypsum board to concrete or gypsum board to window frames.
- .2 Provide metal trim casing beads where gypsum board abuts against a surface having no trim concealing the junction.
- .3 Provide metal trim casing beads where indicated on Drawings.

3.4. JOINT TREATMENT -GYPSUM BOARD

- .1 Verify that board is firm against framing members and screw heads are properly depressed.
- .2 Mix joint compound or ready-to-use compounds according to manufacturer's directions. Use pure, unadulterated, clean water for mixing. Permit mixed material to stand 30 minutes before using. Do not mix more material than can be used within 1 hour. Do not use set or hardened compound. Clean tools and equipment after mixing each batch.
- .3 Use adhesive joint compound at all exterior applications.
- .4 Tape and fill joints and corners in strict accordance with gypsum board manufacturer's printed instructions. Fill either manually, using hand tools of the trade, or by a mechanical taping and filling machine of proven efficiency.
- .5 Remove plastic tape from control joints after finishing with joint compound.
- .6 After final coats of filler have dried at least 24 hours, sand the surface lightly with No.00 sandpaper to leave it smooth, ready for decoration.
- .7 Provide the finished work smooth, seamless, plumb and true, flush and with square plumb neat corners.

3.5. DOOR FRAMES / ACCESS DOORS

- .1 Install access doors supplied by Division 15 and 16. Build doors into gypsum board elements flush and parallel to walls and securely fastened.
- .2 Install steel door frames occurring in gypsum board partitions. Follow installation requirements specified in Section 08100.

END OF GYPSUM BOARD

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Read and conform to:
 - .1 The General Conditions of the Contract CCDC 2,
 - .2 Section 00810, Supplementary Conditions CCDC 2,
 - .3 The Sections of Division 1.

1.2. SCOPE OF WORK

- .1 Furnish all labour, materials and equipment necessary to install terrazzo flooring as indicated on drawings and room finish schedules and as specified herein.

1.3. RELATED WORK

- .1 Related work specified under other section.
 - .1 Concrete slab depression: 50 mm over precast concrete slabs, 65 mm over poured-in-place concrete slabs.
 - .2 Concrete tolerance: 1/8" (3mm) in radius of 10" (3m). Surface steel troweled.
 - .3 Concrete and Concrete Finishing Section 03300.

1.4. QUALITY ASSURANCE

- .1 Installer:
 - .1 Employ skilled mechanics trained and experienced in terrazzo work.
 - .2 Portions of this work shall be executed by a company who is a member in good standing with TTMAC. This work to be done under proper supervision by persons skilled in the method. If installer is not a contractor member of TTMAC, installer must have at least five (5) years proven experience and must submit a list of completed projects of similar magnitude and scope.
- .2 Supplier:
 - .1 A member in good standing with TTMAC, providing materials meeting the minimum standards of TTMAC.

1.5. SUBMITTALS

- .1 Samples and Shop Drawings:
 - .1 Submit samples and shop drawings in accordance with Section 01340.
 - .2 Submit duplicate 150mm x 150mm samples of terrazzo flooring in each colour specified. Submit duplicate 305mm samples of all specified divider strips and control joints.
 - .3 For precast terrazzo, submit shop drawings showing all dimensions, anchors, supports and relation to structure and other work.
 - .4 Submit shop drawings showing location of all expansion, cold, or seismic joints. Note and detail conditions where terrazzo flooring meets adjacent floors. Clearly note depth and area of depressed concrete that may receive an underbed. Show all terrazzo colours and strip sizes.
- .2 Maintenance Instructions:
 - .1 Submit three (3) copies of TTMAC Maintenance Guide for inclusion in project manuals in accordance with Section 01700. Specify warning of any maintenance practice or materials which may damage or disfigure the floorings. Indicate materials recommended for cleaning.

1.6. DELIVERY STORAGE AND HANDLING

- .1 Deliver, store and handle products in a manner to avoid damage. Store materials in a clean, dry, heated location. Materials must be conditioned to ambient temperatures for a period of 24 hours prior to application.

1.7. SITE CONDITIONS

- .1 Examine areas where the work of this section is to be located.
- .2 Do not place terrazzo until unacceptable conditions have been corrected.

- .3 Protect work during installation and protect finished corners exposed to construction operations and traffic.

1.8. SCHEDULING

- .1 Co-operate fully with other trades on the work. Complete work of this Section before the finishing work in the area affected is commenced. Commence and complete work promptly as the work of other subcontracts will permit, and arrange and schedule work, as far as possible, so as to avoid any interference with the execution of the work of other sections.

PART 2: PRODUCTS

2.1. MATERIALS

- .1 Cement: Portland cement to CAN CSA-A5-93.
- .2 Sand: Sharp, screened sand: ASTM C-144.
- .3 Water: Clean water, free from oil, acids, alkali or organic matter.
- .4 Marble chips: clean and sound, to match existing colours exactly.
- .5 Colour pigments: Non-fading mineral pigments.
- .6 Slip resistant material: No. 36 grit aluminium oxide.
- .7 Slip resistant channel strips: Brass or zinc 10 mm x 10 mm, 20 gauge dove-tailed shaped channels with anchor tapes.
- .8 Reinforcing mesh: 51 mm x 51 mm mesh size, fabricated from 1.6 mm thick galvanized wire/fabric welded mesh. ASTM A821/ASTM A185.
- .9 Divider strips: 25 mm to 32 mm deep with anchorage devices.
- .10 Cleavage plane: 0.10 mm thick polyethylene film, to CAN/CGSB-51.34-M86.
- .11 Cleaners: Conforming to CAN/CGSB-2.107-92.
- .12 Sealers: Conforming to CAN/CGSB-25.20-95.
- .13 Floor finish: Conforming to CAN/CGSB-25.21-95.

2.2. MIXES / PROPORTIONS

- .1 Underbed: One part Portland cement to four parts sand by volume. Wet and mix thoroughly to a low slump to provide workability. Adjust water volume depending on moisture content of sand to obtain consistency and workability.
- .2 Terrazzo Topping: One part cement to two parts of marble chips by weight, mixed dry to uniform mixture. Hydrate for 1.5 to 2 hours. Remix to proper plastic consistency.

PART 3: EXECUTION

3.1. EXAMINATION

- .1 Before proceeding with any of the work of this subcontract, visit the place of work and examine work previously installed against or upon which this work will be applied and check any and all condition affecting this work to ensure that such previously built work is satisfactorily installed.
- .2 Verify substrate surfaces are clean, dimensionally stable, cured and free of contaminants such as oil, sealers and curing compounds.
- .3 Verify that concrete has been allowed to cure for 28 days.
- .4 Verify that concrete slabs have a steel trowel finish. Ensure concrete slabs have been finished to a tolerance not exceeding 6 mm in 3050 mm from the required plane.
- .5 Do not proceed with this work until unsatisfactory conditions are corrected. Commencement of work implies acceptance of surfaces and conditions.

3.2. PREPARATION

- .1 Broom clean base slab and fill all voids with loose sand. Apply cleavage plane over sand. Overlap joints 150 mm.
- .2 Install underbed with reinforcing wire mesh with joints overlapping 100 mm. wire mesh must be kept 15 mm above substrate.

3.3. INSTALLATION

- .1 Underbed: Install underbed over properly prepared substrate and screed to within 16 mm of the finished floor elevation. Permit underbed to cure for a minimum 48 hours prior to installation of terrazzo flooring.
- .2 Divider Strips: Install divider strips in underbed while still in plastic state. Set strips true and level to required pattern indicated on the drawings. Form borders and insert strips at junctions with other flooring materials.
- .3 Terrazzo Topping: Allow underbed to cure for 48 hours, sweep or vacuum underbed, saturate with water and remove excess. Apply a cement slurry bond coat and immediately follow with application of terrazzo topping mix. Wet terrazzo topping mixture, mix thoroughly and spread with trowel level to top of strips. Sprinkle topping with dry aggregate chips. Aggregate chip coverage must show a density in excess of 85% exposure on the finished terrazzo surface. Roll with heavy rollers to compact topping until excess cement and water has been extracted. Hand trowel topping surface flush with top of divider strips to close all voids and pin holes. Control cure a minimum of 48 hours. After floor has sufficiently cured, grind with No. 24 grit abrasive stones or with diamond plugs to a smooth, even surface, Clean off all loose materials and grout surface with white cement grout. Leave grout on surface until final polishing. General Contractor shall coordinate completion of other trades at this time prior to final polishing. Not less than 72 hours after grout is applied and when notified by General Contractor that all rough trades have finished, follow initial grind with No. 80 grit or finer stones, to a maximum of 120 grit, until all grout is removed and leaving a fine, smooth finish. Grind internal corners and edges to same finish as remainder of terrazzo. Let surface dry thoroughly and apply sealer per manufacturer's instructions.

3.4. CLEANING / SEALING

- .1 Refer to latest TTMAC Maintenance Guide.

3.5. PROTECTION AND RESPONSIBILITY

- .1 Fully protect the work from damage and be entirely responsible for and make good any damage to finished work by whom-so-ever caused, from commencement to completion of this subcontract.
- .2 Fully protect the work of other subcontracts from damage arising out of the execution of the work of this subcontract. Cover adjoining surfaces where necessary to protect them from spatters.
- .3 Remove and replace with perfect materials, sections of the work which have become stained, soiled, broken, chipped or otherwise damaged, promptly upon notification of such damage.
- .4 Promptly upon completion of each area of work and following preliminary inspection by the Architect, cover finished surfaces and protect exposed corners and areas vulnerable to damage by persons or by the movement of materials, tools or equipment.
- .5 Maintain protective coverings in good condition until the Contractor orders their removal.
- .6 Prohibit traffic during installation and for 72 hours after completion.
- .7 When requested by Architect, remove protection from finished areas for inspection and approval. When approved, the protection of the finished surface will become the responsibility of the Contractor.

3.6. CLEANING

- .1 Upon completion of the work, or at such time or times as the Contractor shall direct, remove protective coverings and clean down the finished work, leaving it in perfect condition, satisfactory to the Architect. At this time, correct unsatisfactory conditions.
- .2 Clean adjacent surfaces, which have been soiled or otherwise marred, in an approved manner, to completely remove evidence of material causing same.

END OF PORTLAND CEMENT TERRAZZO

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- .1 Division 15: Mechanical Items Installed in Ceiling System
- .2 Division 16: Electrical Items Installed in Ceiling System

1.3. SCOPE OF WORK

- .1 Furnish all labour, materials and equipment necessary to supply and install suspension grid system complete with hangers, tie wire, fastenings, and hold down clips as indicated on drawings and specified herein.
- .2 Furnish all labour materials and equipment necessary to supply and install mineral acoustic ceiling tiles as indicated on drawings, room finish schedules and as specified herein.

1.4. SUBMITTALS

- .1 Submit duplicate 600mm x 600mm square samples of each type of mineral acoustic ceiling tile to be used in this project for the Consultant's review.
- .2 Submit for Consultant's approval, prior to ordering of materials, labelled samples of main tee and cross tee grid members, indicating manufacturer's name and product code or number.
- .3 Maintenance Materials: Provide 2% additional matching ceiling tiles for maintenance purposes. Turn over to General Contractor and obtain receipt.

1.5. QUALITY ASSURANCE

- .1 Suspension grid system and acoustic ceilings to be installed by fully qualified workmen and in strict accordance with system manufacturers printed instructions to produce a first class installation.
- .2 Suspension grid system to be installed by an approved subcontractor who is to assume complete responsibility for levelling the system.

1.6. REFERENCES

- .1 The following standards and criteria to serve as minimum guidelines for materials and installation of all acoustical work covered for this section:
 - .1 CAN/CGSB-92.1-M89: Sound Absorptive Prefabricated Acoustical Units
 - .2 ASTM C636 / C636M - 13: Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - .3 ULC Design No. I211 or equivalent tested and approved assembly: **for all ceiling designated to have a 1hr fire resistance rating**, unless indicated otherwise.

1.7. DELIVERY, STORAGE AND HANDLING

- .1 Materials to be delivered to job site in undamaged original factory wrappings and stored in a dry, weatherproof, heated location as directed by Contractor.
- .2 Do not deliver materials to the site until the building is ready for the installation of this material.

1.8. PROJECT ENVIRONMENT

- .1 Permit wet work to dry prior to commencement of installation.
- .2 Maintain uniform minimum temperature of 15°C and humidity of 20-40% before, during and after installation.
- .3 Store materials in work area 48 hours prior to installation.

1.9. CO-ORDINATION

- .1 Co-ordinate installation of suspension grid system with mechanical and electrical trades in order to obtain proper locations of electrical fixtures and air distribution grilles.
- .2 It is the intent that all fixtures, grilles, vents, etc. are to be symmetrically located in the ceiling layout, unless otherwise indicated.

PART 2: PRODUCTS

2.1. ACCEPTABLE MANUFACTURERS

- .1 This portion of the specification has been prepared on the basis of using suspension grid system and mineral acoustic ceiling tiles by Armstrong World Industries Canada Ltd.

2.2. MATERIALS

- .1 Hanger Wire: 2.5mm diameter galvanized steel wire.
- .2 Cold Rolled Steel Channels: 1.7mm thick, 38mm deep, with 14mm wide flanges.
- .3 Grid System: Exposed fire rated grid system. This portion of specification is based on use of Bailey Metal products. Equivalent products by Donn Canada or Chicago Metallic will be acceptable.
 - .1 Grid system shall be double web design, 38mm (1 1/2") high, heavy duty fire rated Lance-Lock System 1800, with rectangular top bulb and exposed 24mm flange with rolled cap.
 - .2 Angle edge trim shall be standard item by system supplier, 19mm wide flange with rolled cap.
 - .3 All of above shall be cold rolled zinc coated steel finished with baked-on low sheen white enamel.
- .4 Acoustic Tile: Shall be 610mm x 1220mm x 16 mm thick, **1hr fire rated**, mineral acoustic tile with white finish. Use **CGC "Radar"** panels (rectangular).
- .5 Hold Down Clips: Formed from spring steel, 27mm high x 16mm wide x 0.4mm thick, placed as required in Part 3.3 following.
- .6 Light Fixture Yoke: 1.6mm painted steel channels
- .7 Light Fixture Protection Box: Five-sided light fixture protection box, made from 16mm thick acoustic material and measuring 600mm x 1200mm x approx 150mm, assembled with 63mm common nails, spaced 125mm o.c., toe-nailed alternately at 45 degree angles.
- .8 Accessories: To include splices, clips, wire ties, retainers and miscellaneous moulding, to complement suspension system components, as recommended by system manufacturer.

PART 3: EXECUTION

3.1. INSPECTION

- .1 Prior to installation, carefully inspect the installed work of all other trades and verify that such work is complete to the point where the installation of acoustical treatment may properly commence.
- .2 Do not erect ceiling suspension until work above ceiling has been properly inspected by Consultant.

3.2. PREPARATION

- .1 Supply hangers and inserts to support the grid in time to be installed into structural system if required.
- .2 Commence installation after the building has been totally enclosed and dust generating activities have been completed. Do not commence work in areas where glazing is incomplete or concrete is not thoroughly dry.
- .3 Walls shall at least have been prime coated and mechanical and electrical rough-in work completed before proceeding with installation of acoustic tile.
- .4 Co-ordinate acoustic work with mechanical and electrical plans to ensure proper locations of diffusers, grilles, fixtures, etc. Suspension of mechanical and electrical items shall be responsibility of mechanical and electrical trades.

3.3. INSTALLATION OF CEILINGS

- .1 Suspension system for acoustic ceilings shall be installed by experienced skilled personnel working for subcontractor who shall assume complete responsibility for levelling system. Install hangers in co-operation with General Contractor and other trades.

- .2 **At steel deck assemblies, do not attach hangers to steel decks.** Supply and install additional back-to-back cold rolled channels spanning between structural steel framing members as required for placement of hangers at 1220 mm o.c. and maximum 610 mm from walls. Where structural support exceeds 2400mm provide "Uni-Strut" ceiling support with extrusions at 1200mm O.C. complete with threaded rod support from structural members.
- .3 Suspension systems using exposed tee bar grid members to form a 610mm x 1220mm layout. Layout centreline of ceiling both ways, to provide balanced borders at room perimeter with border units not less than ½ tile dimension unless otherwise indicated on reflected ceiling plan.
- .4 Secure hangers firmly to lower chord of metal bar joists or to cold-rolled support channels attached to bar joists or bridging. Crimping of hanger or attachment of hanger to pipes and ducts will not be permitted. **Hangers must not exceed 5 degrees of plumb.**
- .5 Do not install hangers in front of equipment access panels.
- .6 Hang suspended grid system with hanger wires at approximately 1220 mm o.c. maximum both ways, maximum 610 mm from walls. Hangers and chains for light fixtures not to be in contact with mechanical systems. Secure hangers to main tees by looping end of hanger through hole in tees and tying end of hanger to its vertical suspension with minimum two twists.
- .7 Install cross tee sections at right angles and lock securely in place at intersection to provide a rigid assembly.
- .8 Install wall mouldings at junctions of ceiling and vertical surfaces. Butt joints neatly, square and true in alignment. Provide spring clips to produce tight installation.
- .9 Frame grid system at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights. Furr ceilings down around ducts, beams, bulkheads or other items as may be required.
- .10 Level entire grid system to provide flush finished surface in true planes and free from dropping, warped, or uneven joints. Finish grid system to be levelled to 1:1000. The suspension system to have maximum deflection of 1/360th spans.
- .11 Support light fixtures and diffusers with separate additional ceiling suspension hangers within 150mm of each corner and at maximum 600mm around perimeter of fixture.
- .12 Walls to be at least prime coated and mechanical rough-in to be completed prior to proceeding with installation of acoustic tile.
- .13 Carefully install acoustic ceiling tiles. Be responsible for all cutting and fitting of ceiling tiles around ducts, pipes, conduits, grilles, registers, diffusers, speakers, light fixtures, brackets, and similar items. Butt joints tight, terminate edges with moulding.
- .14 Provide hold down clips for all tile occurring within 4800mm of exterior doors and as required to meet fire rating indicated.

3.4. **INSTALLATION OF FIRE RATED CEILINGS**

- .1 Where fire rated ceilings are indicated, install the ceiling system in strict accordance with the requirements of ULC Design No. I211 and as follows, unless indicated otherwise.
- .2 Install hanger wire attached to steel framing members at all four corners of light fixtures, at the intersection of members supporting acoustical tiles having duct outlets and at no more than 1200 mm OC along main tees. Additional wires shall be attached at the centre of each 1500mm long cross-tee.
- .3 Install light fixture protection box over each light fixture.
- .4 Install light fixture yoke, secured to web of cross-tees supporting the light fixtures and located at the centre of each frame.
- .5 Install hold-down clips spaced over the cross-tees, one per 600mm length of tile.
- .6 Firestop flaps to be supplied and installed by Division 15.

3.5. ADJUSTING AND CLEANING

- .1 Touch up scratches, abrasions, voids, and other defects in painted surfaces to the approval of the Consultant.
- .2 Clean up and remove debris, caused by this construction after the completion of installation.

END OF ACOUSTIC TILE CEILINGS

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- .1 Read carefully all other Sections of the specifications to determine the extent of prime and finish coats applied by others.
 - .1 Section 01500 - Temporary Facilities and Controls (temporary heat, lighting, scaffolds, etc.)
 - .2 Section 05120 - Structural Steel and Steel Joists (shop primers and pre-finishing if applicable)
 - .3 Section 05315 - Metal Decking (shop coatings)
 - .4 Section 05500 - Miscellaneous Metal Fabrications (shop primers and pre-finishing if applicable)
 - .5 Section 06200 - Finish Carpentry (priming and finishing)
 - .6 Section 08210 - Wood Doors and Frames (pre-finishing)
 - .7 Section 09920 - Interior Repainting
 - .8 Division 15 - Mechanical (painting, stenciling, banding of mechanical systems)
 - .9 Division 16 - Electrical (painting, stenciling, banding of electrical systems)

1.3. SCOPE OF WORK

- .1 Section Includes: All labor, materials, tools and other equipment, services and supervision required to complete all exterior and interior painting and decorating work as indicated on Finish Schedules and to the full extent of the drawings and specifications.
- .2 Work under this contract shall also include, but not necessarily be limited to:
 - .1 Surface preparation of substrates as required for acceptance of painting, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under **MPI** preparation requirements.
 - .2 Surface preparation and prime painting surfaces for wall coverings prior to installation in accordance with **MPI** and wall covering manufacturer's requirements.
 - .3 Specific pre-treatments noted herein or specified in the **MPI** Architectural Painting Specification Manual.
 - .4 Priming (except where pre-primed with an approved primer under other Sections of work) and painting of structural steel, miscellaneous metal, ornamental metal and primed steel equipment.
 - .5 Priming and back-priming of wood materials as noted herein or specified in the **MPI** Architectural Painting Specification Manual.
 - .6 Painting of all semi-concealed areas (e.g. inside of light troughs and valances, behind grilles, and projecting edges above and below sight lines).
 - .7 Painting of roof vent flashings in accordance with the requirements of Section 07600.
 - .8 Painting of exposed to view mechanical (heating, ventilating and plumbing) services and equipment, e.g., ducts, sprinkler piping, etc., and electrical work to extent noted on Finish Schedule unless pre-finished.
 - .9 Re-painting of existing surfaces and finishes when adjacent to new painting work where applicable including surface preparation, prime and finish coats in accordance with **MPI** Repainting requirements.
 - .10 Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile / flammable materials are being used.
- .3 Refer to drawings and schedules (e.g., Finish Schedule) for type, location and extent of finishes required, and include all touch-ups and field painting necessary to complete work shown, scheduled or specified.

1.4. REFERENCES:

- .1 The latest edition of the following reference standards shall govern all painting work:

- .1 Architectural Painting Specification Manual by the Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List. (hereafter referred to as the MPI Painting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.
- .2 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).
- .3 National Fire Code of Canada.

1.5. QUALITY ASSURANCE:

- .1 This Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested, Contractor shall provide a list of the last three comparable jobs including, name and location, specifying authority / project manager, start / completion dates and value of the painting work.
- .2 Only qualified journeypersons, as defined by local jurisdiction shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
- .3 All materials, preparation and workmanship shall conform to requirements of the latest edition of the Architectural Painting Specification Manual by the Master Painters Institute (MPI) (hereafter referred to as the MPI Painting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.
- .4 All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual.
- .5 All painting and decorating work shall be inspected by a Paint Inspection Agency (inspector) acceptable to the specifying authority and the local MPI Accredited Quality Assurance Association. The painting contractor shall notify the Paint Inspection Agency a minimum of one week prior to commencement of work and provide a copy of the project painting specification, plans and elevation drawings (including pertinent details) as well as a Finish Schedule.
- .6 All surfaces requiring painting shall be inspected by the Paint Inspection Agency who shall notify the Consultant and General Contractor in writing of any defects or problems, prior to commencing painting work, or after the prime coat shows defects in the substrate.
- .7 The painting contractor shall receive written confirmation of the specific surface preparation procedures and primers used for all fabricated steel items from the fabricator / supplier to ascertain appropriate and manufacturer compatible finish coat materials to be used before painting any such work.

1.6. REGULATORY REQUIREMENTS:

- .1 Conform to the latest edition of Industrial Health and Safety Regulations issued by applicable authorities having jurisdiction in regard to site safety (ladders, scaffolding, ventilation, etc.).
- .2 Conform to requirements of local authorities having jurisdiction in regard to the storage, mixing, application and disposal of all paint and related waste materials. Refer to Waste Management and Disposal.
- .3 Notify the Paint Inspection Agency on award of contract and make application for assignment of an Inspector using appropriate forms supplied by the Agency as well as provide a copy of the project painting specification, drawings, color schedule and list of proposed materials for review purposes prior to commencement of work.
- .4 Fully cooperate at all times with the requirements of the Paint Inspection Agency in the performance of their duties, including providing access and assistance as required to complete inspection work.

1.7. SAMPLES AND MOCK-UPS:

- .1 When requested by the Consultant or Paint Inspection Agency, provide duplicate minimum 300 mm (12") square samples of surfaces or acceptable facsimiles requested painted with

specified paint or coating in colors, gloss / sheen and textures required to MPI Painting Manual standards for review and approval. When approved, samples shall become acceptable standard of quality for appropriate on-site surface with one of each sample retained on-site.

- .2 When requested by the Consultant or Paint Inspection Agency, prepare and paint designated surface, area, room or item (in each color scheme) to requirements specified herein, with specified paint or coating showing selected colors, gloss / sheen, textures and workmanship to MPI Painting Manual standards for review and approval. When approved, surface, area, room and/or items shall become acceptable standard of finish quality and workmanship for similar on-site work.

1.8. SUBMITTALS:

- .1 All submittals shall be in accordance with the requirements of Section 01340 – Shop Drawings.
- .2 Submit consent of surety with Bid Submission as proof of ability to supply a 100% two (2) year Maintenance Bond, if an MPI Accredited Quality Assurance Association's guarantee option is not used.
- .3 If requested, submit a list of all painting materials to the Consultant and the Paint Inspection Agency for review prior to ordering materials. If requested, provide an invoice list of all paint materials ordered for project work to Paint Inspection Agency indicating manufacturer, types and quantities for verification and compliance with specification and design requirements.
- .4 Submit two sets of Material Safety Data Sheets (MSDS) prior to commencement of work for review and for posting at job site as required.
- .5 If requested, submit work schedule for various stages of work when painting occupied areas for the Consultant's review and Owner's approval.
- .6 At project completion provide an itemized list complete with manufacturer, paint type and color coding for all colors used for Owner's later use in maintenance.
- .7 At project completion provide properly packaged maintenance materials as noted herein and obtain a signed receipt.

1.9. PRODUCT DELIVERY, STORAGE AND HANDLING:

- .1 Deliver all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
- .2 Store all paint materials in original labeled containers in a secure (lockable), dry, heated and well ventilated single designated area meeting the minimum requirements of both paint manufacturer and authorities having jurisdiction and at a minimum ambient temperature of 45° F (7° C). Only material used on this project to be stored on site.
- .3 Where toxic and/or volatile / explosive / flammable materials are being used, provide adequate fireproof storage lockers and take all necessary precautions and post adequate warnings (e.g. no smoking) as required.
- .4 Take all necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) shall be stored in suitable closed and rated containers and removed from the site on a daily basis.
- .5 Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.

1.10. SCHEDULING:

- .1 Schedule painting operations to prevent disruption of and by other trades.
- .2 Schedule painting operations in occupied facilities to prevent disruption of occupants in and about the building. Painting shall be carried out on weekends in accordance with Owner's operating requirements. Schedule work such that painted surfaces will have dried before occupants are affected. Obtain written authorization from Consultant / Owner for changes in work schedule.

1.11. PROJECT / SITE REQUIREMENTS:

- .1 UNLESS specifically pre-approved by the specifying body, Paint Inspection Agency and the applied product manufacturer, perform no painting or decorating work when the ambient air and substrate temperatures are below 50° F (10° C) for both interior and exterior work.
- .2 Perform no exterior painting work unless environmental conditions are within MPI and paint manufacturer's requirements or until adequate weather protection is provided. Where required, suitable weatherproof covering and sufficient heating facilities shall be in place to maintain minimum ambient air and substrate temperatures for 24 hours before, during and after paint application.
- .3 Perform no interior painting or decorating work unless adequate continuous ventilation and sufficient heating facilities are in place to maintain ambient air and substrate temperatures above minimum requirements for 24 hours before, during and after paint application. Provide supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements.
- .4 Perform no painting or decorating work when the relative humidity is above 85% or when the dew point is less than 5° F (3° C) variance between the air / surface temperature.
- .5 Perform no painting or decorating work when the maximum moisture content of the substrate exceeds:
 - .1 15% for wood.
 - .2 12 % for plaster and gypsum board.
- .6 Conduct all moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple cover patch test.
- .7 Test concrete, masonry and plaster surfaces for alkalinity as required.
 - .1 **Note:** Concrete and masonry surfaces must be installed at least 28 days prior to painting and decorating work and must be visually dry on both sides.
- .8 Apply paint only to dry, clean, properly cured and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.
- .9 Perform no painting or decorating work unless a minimum lighting level of 323 Lux (30 foot candles) is provided on surfaces to be painted or decorated. Adequate lighting facilities shall be provided by the General Contractor.

1.12. MAINTENANCE MATERIALS:

- .1 At project completion provide 4 liters (1 gallon) of each type and color of paint from same production run (batch mix) used in unopened cans, properly labeled and identified for Owner's later use in maintenance. Store where directed.

1.13. WASTE MANAGEMENT AND DISPOSAL:

- .1 Paint, stain and wood preservative finishes and related materials (thinners, solvents, etc.) are regarded as hazardous products and are subject to regulations for disposal. Obtain information on these controls from applicable Provincial government departments having jurisdiction.
- .2 All waste materials shall be separated and recycled. Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility. Materials that cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.
- .3 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.
- .4 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground the following procedures shall be strictly adhered to:
 - .1 Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
 - .2 Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.

- .3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
- .4 Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
- .5 Empty paint cans are to be dry prior to disposal or recycling (where available).
- .6 Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.
- .5 Set aside and protect surplus and uncontaminated finish materials not required by the Owner and deliver or arrange collection for verifiable re-use or re-manufacturing.

1.14. GUARANTEE:

- .1 Furnish either the local MPI Accredited Quality Assurance Association's two (2) year guarantee, or, alternatively, a 100% two (2) year Maintenance Bond - both in accordance with MPI Painting Manual requirements. The Maintenance Bond shall warrant that all painting work has been performed in accordance with MPI Painting Manual requirements.
- .2 All painting and decorating work shall be in accordance with MPI Painting Manual requirements and shall be inspected by the local MPI Accredited Quality Assurance Association's Paint Inspection Agency (inspector), whether using either the MPI Accredited Quality Assurance Association's guarantee, or the Maintenance Bond option. The cost for such inspections, and for either the local MPI Accredited Quality Assurance Association's Guarantee, or the Maintenance Bond, shall be included in the Base Bid Price.
- .3 Painting and decorating Subcontractors choosing the Maintenance Bond option shall provide a maintenance bond consent from a reputable surety company licensed to do business in Canada. Cash or certified check are not acceptable in lieu of surety consent.

PART 2: PRODUCTS

2.1. MATERIALS

- .1 Only materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, etc.) listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project. All such material shall be from a single manufacturer for each system used.
- .2 Other materials such as linseed oil, shellac, thinners, solvents, etc. shall be the highest quality product of an MPI listed manufacturer and shall be compatible with paint materials being used as required.
- .3 All materials used shall be lead and mercury free and shall have low VOC content where possible.
- .4 Where required, use only materials having a minimum MPI "Environmentally Friendly" E1 rating based on VOC (EPA Method 24) content levels.
- .5 Where indoor air quality (odour) is an issue, use only MPI listed materials having a minimum E2 rating.
- .6 All paint materials shall have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc. Refer to 3.7, Field Quality Control / Standard of Acceptance requirements.
- .7 Where required, paints and coatings shall meet flame spread and smoke developed ratings designated by local Code requirements and/or authorities having jurisdiction.

2.2. EQUIPMENT:

- .1 Painting and Decorating Equipment: to best trade standards for type of product and application.
- .2 Spray Painting Equipment: of ample capacity, suited to the type and consistency of paint or coating being applied and kept clean and in good working order at all times.

2.3. MIXING AND TINTING:

- .1 Unless otherwise specified herein or pre-approved, all paint shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.
- .2 Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.
- .3 Where thinner is used, addition shall not exceed paint manufacturer's recommendations. Do not use kerosene or any such organic solvents to thin water-based paints.
- .4 If required, thin paint for spraying according in strict accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Consultant.

2.4. FINISH AND COLORS:

- .1 Unless otherwise specified herein, all painting work shall be in accordance with MPI Premium Grade finish requirements.
- .2 Colors shall be as selected by the Consultant from a manufacturer's full range of colors. A Finish Schedule will be furnished after award of the Contract.
- .3 Generally and unless otherwise specified herein or noted on Finish Schedules the quantity of colors and finishes shall be based on the following criteria:
 - .1 Exterior colors will be based on two (2) base colors and one (1) accent color with a maximum of two (2) deep or bright colors. No more than three (3) colors will be selected for the entire project. Note that this does not include pre-finished items by others, e.g. flashings, aluminum or vinyl windows, aluminum doors, etc.
 - .2 Interior colors will be based on five (5) base colors and three (3) accent colors with a maximum of three (3) deep or bright colors. No more than eight (8) colors will be selected for the entire project and no more than three (3) colors will be selected in each area. Note that this does not include pre-finished items by others, e.g. aluminum or vinyl windows, aluminum doors and handrails, etc.
 - .3 Interior colors and/or patterns shall be consistent with a maximum of three (3) separate schemes prepared.
 - .4 Ceilings (except those having a spray textured coating) shall be painted white.
- .4 Except as noted herein or indicated on the Finish Schedule, interior walls and ceiling surfaces shall be painted in accordance with the following criteria over appropriate prime / sealer coat:
 - .1 all masonry surface areas (except as noted): washable latex with G5 (semi-gloss) finish.
 - .2 all gypsum board surface areas (except as noted): washable latex with G4 (satin) finish.
 - .3 laundry facilities / rooms, washrooms,: [washable latex with G5 (semi-gloss) finish.
 - .4 "clean" or "sanitary" areas such as food preparation and laboratory areas: epoxy (tile-like) G5 (semi-gloss) finish for dry surfaces.]
- .5 Doors shall be painted a different color than door frames with walls a different color than either. Unless otherwise noted or scheduled all doors, frames and trim shall be painted using a G5 (semi-gloss) finish.
- .6 Access doors, prime coated butts and other prime painted hardware (e.g. door closers), registers, radiators and covers, exposed piping and electrical panels shall be painted to match adjacent surfaces (i.e. same color, texture and sheen), unless otherwise noted or where pre-finished.
- .7 Plywood service panels (e.g. electrical, telephone and cable vision panels) including edges shall be back-primed and painted to match painted wall mounted on.
- .8 The inside of light valances shall be painted gloss white.
- .9 The inside of all duct work behind louvers, grills and diffusers for a minimum of 460 mm (18") or beyond sight line, whichever is greater, shall be painted using flat black (non-reflecting) paint.

- .10 Low headroom areas shall be identified with minimum 100 mm (4") wide yellow band on leading edge marked "CAUTION _ LOW CLEARANCE" in 50 mm (2") high black letters at suitable intervals and/or in accordance with the requirements or authorities having jurisdiction.
- .11 Where other methods are not specified (i.e. applied material or nosings) and/or in accordance with the requirements or authorities having jurisdiction at stairs providing access and exit for persons with visual impairment, slip resistant paint shall be applied to handrails and treads. Slip resistant paint shall be of a contrasting color at tactile warning strips at stair treads and landings.

2.5. GLOSS / SHEEN RATINGS:

- .1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with the following MPI values:

GLOSS	DESCRIPTION	UNITS@ 60 DEGREES	UNITS@ 85 DEGREES
G1	MATTE OR FLAT FINISH	0 TO 5	10 MAX.
G2	VELVET FINISH	0 TO 10	10 TO 35
G3	EGGSHELL FINISH	10 TO 25	10 TO 35
G4	SATIN FINISH	20 TO 35	35 MIN.
G5	SEMI-GLOSS FINISH	35 TO 70	
G6	GLOSS FINISH	70 TO 85	
G7	HIGH-GLOSS FINISH	> 85	

- .2 Gloss level ratings of all painted surfaces shall be as specified herein and as noted on Finish Schedule.

PART 3: EXECUTION

3.1. CONDITION OF SURFACES:

- .1 Prior to commencement of work of this section, thoroughly examine (and test as required) all conditions and surfaces scheduled to be painted and report in writing to the Contractor and Consultant any conditions or surfaces that will adversely affect work of this section.
- .2 No painting work shall commence until all such adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Painting Subcontractor and Inspection Agency.
- .3 Commencement of work shall not be held to imply acceptance of surfaces except as qualified herein. Such surfaces as concrete, masonry, structural steel and miscellaneous metal, wood, gypsum board and plaster, shall not be the responsibility of the Painting Subcontractor.
- .4 The Painting Subcontractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate which may adversely affect the painting work except for minimal work normally performed by the Painting Subcontractor and as indicated herein. It shall always, however, be the responsibility of the Painting Subcontractor to see that surfaces are properly prepared before any paint or coating is applied.

3.2. PREPARATION OF SURFACES:

- .1 Prepare all surfaces in accordance with MPI requirements. Refer to the MPI Painting Manual in regard to specific requirements.
- .2 Sand, clean, dry, etch, neutralize and/or test all surfaces under adequate illumination, ventilation and temperature requirements.
- .3 Remove and securely store all miscellaneous hardware and surface fittings / fastenings (e.g. electrical plates, mechanical louvers, door and window hardware (e.g. hinges, knobs, locks, trim, frame stops), removable rating / hazard / instruction labels, washroom accessories, light fixture trim, etc. from wall and ceiling surfaces, doors and frames, prior to painting. Carefully clean and replace all such items upon completion of painting work in each area. Do not use solvent or reactive cleaning agents on items that will mar or remove finishes (e.g. lacquer finishes). Doors shall be removed before painting to paint bottom and top edges and then re-hung.
- .4 Protect all adjacent interior surfaces and areas, including rating and instruction labels on doors, frames, equipment, piping, etc., from painting operations and damage with drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
- .5 Substrate defects shall be made good and sanded by others ready for painting particularly after the first coat of paint. Start of finish painting of defective surfaces (e.g. gypsum board) shall indicate acceptance of substrate and any costs of making good defects shall be borne by the painter including re-painting of entire defective surface (no touch-up painting).
- .6 Confirm preparation and primer used with fabricator of steel items. Refer to Quality Assurance.

3.3. APPLICATION:

- .1 Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other subtrade work) are acceptable for applications of products.
- .2 Apply paint or stain in accordance with MPI Painting Manual Premium Grade finish requirements.
- .3 Apply paint and decorating material in a workmanlike manner using skilled and trade qualified applicators as noted under Quality Assurance.
- .4 Apply paint and coatings within an appropriate time frame after cleaning when environmental conditions encourage flash-rusting, rusting, contamination or the manufacturer's paint specifications require earlier applications.
- .5 Painting coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .6 Tint each coat of paint progressively lighter to enable confirmation of number of coats.
- .7 Unless otherwise approved by the painting inspection agency, apply a minimum of four coats of paint where deep or bright colors are used to achieve satisfactory results.
- .8 Sand and dust between each coat to provide an anchor for next coat and to remove defects visible from a distance up to 1000 mm (39").
- .9 Do not apply finishes on surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.
- .10 Prime coat of stain or varnish finishes may be reduced in accordance with manufacturer's directions.
- .11 Paint finish shall continue through behind all wall-mounted items (e.g. chalk and tack boards).

3.4. EXTERIOR FINISH / COATING SYSTEMS:

- .1 Paint exterior surfaces in accordance with the following MPI Painting Manual requirements:
 - .1 Structural Steel and Metal Fabrications:

- .1 EXT 5.1B Water based light industrial G5 coating (over inorganic zinc primer).
- .2 Steel - High Heat: (heat exchangers, breeching, pipes, flues, stacks, etc., with temperature range as noted)
 - .1 EXT 5.2A Heat resistant enamel finish, maximum 400° F (205° C)
 - .2 EXT 5.2B Heat resistant enamel, aluminum finish, maximum 800° F (427° C).
 - .3 EXT 5.2C Inorganic zinc rich coating, maximum 750° F (400° C).
 - .4 EXT 5.2D High heat resistant coating, maximum 1100° F (593° C).
- .3 Galvanized Metal: (not chromate passivated)
- .4 For high contact / high traffic areas (doors, frames, railings, misc. steel, pipes, etc.)
- .5 For low contact / low traffic areas (overhead decking, ducts, gutters, flashing, etc.)
 - .1 EXT 5.3B Alkyd G5 finish for use on low contact / low traffic areas.
 - .2 EXT 5.3C Epoxy finish for use on high contact / high traffic areas
 - .3 EXT 5.3E Bituminous finish for use on low contact / low traffic areas, e.g. unexposed galvanized metal next to concrete, masonry, etc.

3.5. INTERIOR PAINT AND COATING SYSTEMS:

- .1 Paint interior surfaces in accordance with the following MPI Painting Manual requirements:
 - .1 Concrete Horizontal Surfaces: (floors and stairs)
 - .1 INT 3.2F Concrete floor sealer finish.
 - .2 Concrete Masonry Units: (smooth and split face block and brick)
 - .1 INT 4.2A Latex G5 finish.
 - .2 INT 4.2R Epoxy high build low gloss finish (over epoxy high build low gloss).
 - .3 Structural Steel and Metal Fabrications: (columns, beams, joists, etc.)
 - .1 INT 5.1E Alkyd G5 finish.
 - .4 Steel - High Heat: (boilers, furnaces, heat exchangers, breeching, pipes, flues, stacks, etc., with temperature range as noted)
 - .1 INT 5.2A Heat resistant enamel finish, maximum 400° F (205° C).
 - .2 INT 5.2B Heat resistant enamel, aluminum paint finish, maximum 800° F (427° C).
 - .3 INT 5.2C Inorganic zinc rich coating, maximum 750° F (400° C).
 - .4 INT 5.2D High heat resistant coating, maximum 1100° F (593° C).
 - .5 Galvanized Metal: (doors, frames, railings, misc. steel, pipes, overhead decking, ducts, etc.)
 - .1 INT 5.3A Latex G6 finish.
 - .6 Dressed Lumber: (including doors, door and window frames, casings, molding, etc. where painted)
 - .1 INT 6.3E Polyurethane varnish G5 finish (over stain).
 - .2 INT 6.3K Polyurethane varnish G5 finish.
 - .3 INT 6.3T Latex semi-gloss finish (over latex primer).
 - .4 INT 6.3U Latex semi-gloss finish (over alkyd primer).
 - .7 Wood Casework: (shelving, millwork, etc. where painted)
 - .1 INT 6.4A Latex G5 finish (over alkyd sealer).
 - .2 INT 6.4E Polyurethane varnish G5 finish (over stain).
 - .3 INT 6.4J Polyurethane varnish G5 finish.
 - .4 INT 6.4R Latex semi-gloss finish (over latex primer).
 - .8 Plaster and Gypsum Board: (gypsum wallboard, drywall, "sheet rock type material", etc., and textured finishes)
 - .1 INT 9.2B High performance architectural latex G4 finish.
 - .2 INT 9.2N Epoxy high build low gloss finish (over latex sealer).
 - .9 Canvas and Cotton Coverings:
 - .1 INT 10.1A Latex G3 finish.

3.6. MECHANICAL / ELECTRICAL EQUIPMENT AND RELATED SURFACES:

- .1 Unless otherwise specified or noted, paint all “unfinished” conduits, piping, hangers, ductwork and other mechanical and electrical equipment with color and texture to match adjacent surfaces, in the following areas:
 - .1 where exposed-to-view in all exterior and interior areas.
 - .2 in all interior high humidity interior areas.
 - .3 in all boiler room, mechanical and electrical rooms.
- .2 In unfinished areas leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks.
- .3 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .4 Do not paint over nameplates.
- .5 Paint the inside of all ductwork where visible behind louvers, grilles and diffusers for a minimum of 460 mm (18”) or beyond sight line, whichever is greater, with primer and one coat of matt black (non-reflecting) paint.
- .6 Paint the inside of light valances gloss white.
- .7 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
- .8 Paint red or band all fire protection piping and sprinkler lines in accordance with mechanical specification requirements. Keep sprinkler heads free of paint.
- .9 Paint yellow or band all natural gas piping in accordance with mechanical specification requirements.
- .10 Backprime and paint face and edges of plywood service panels for telephone and electrical equipment before installation to match adjacent wall surface. Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.

3.7. FIELD QUALITY CONTROL / STANDARD OF ACCEPTANCE:

- .1 All surfaces, preparation and paint applications shall be inspected.
- .2 Painted exterior and interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Painting Inspection Agency inspector:
 - .1 brush / roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
 - .2 evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - .3 damage due to touching before paint is sufficiently dry or any other contributory cause.
 - .4 damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - .5 damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).
- .3 Painted surfaces shall be considered unacceptable if any of the following are evident under natural lighting source for exterior surfaces and final lighting source (including daylight) for interior surfaces:
 - .1 visible defects are evident on vertical surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39”).
 - .2 visible defects are evident on horizontal surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39”).
 - .3 visible defects are evident on ceiling, soffit and other overhead surfaces when viewed at normal viewing angles.
 - .4 when the final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
- .4 Painted surfaces rejected by the inspector shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas or areas without

sufficient dry film thickness of paint shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.

3.8. PROTECTION:

- .1 Protect all exterior surfaces and areas, including landscaping, walks, drives, all adjacent building surfaces (including glass, aluminum surfaces, etc.) and equipment and any labels and signage from painting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
- .2 Protect all interior surfaces and areas, including glass, aluminum surfaces, etc. and equipment and any labels and signage from painting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
- .3 Erect barriers or screens and post signs to warn of or limit or direct traffic away or around work area as required.

3.9. CLEAN-UP:

- .1 Remove all paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .2 Keep work area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.
- .3 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .4 Clean equipment and dispose of wash water / solvents as well as all other cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, paint removers / strippers in accordance with the safety requirements of authorities having jurisdiction.

3.10. REPAINTING OF EXISTING FINISHES:

- .1 Refer to MPI Maintenance Repainting Manual and Section 09920 for repainting of existing finishes.
- .2 Use finish coat of respective new surface paint system for minor repair of existing finishes. Use system primer where existing finishes are damaged down to bare surface.

END OF PAINTING

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. RELATED WORK SPECIFIED ELSEWHERE

- .1 Read carefully all other Sections of the specifications to determine the extent of prime and finish coats applied by others.
 - .1 Section 01500 - Temporary Facilities and Controls (temporary heat, lighting, scaffolds, etc.)
 - .2 Section 09900 - Painting
 - .3 Division 15 - Mechanical (painting, stenciling, banding of mechanical systems)
 - .4 Division 16 - Electrical (painting, stenciling, banding of electrical systems)

1.3. SCOPE OF WORK

- .1 Section Includes: All labor, materials, tools and other equipment, services and supervision required to complete all exterior repainting work as indicated on Finish Schedules and to the full extent of the drawings and specifications.
- .2 Work under this contract shall also include, but not necessarily be limited to:
 - .1 Moisture testing of substrates.
 - .2 Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under MPI Repainting Manual Preparation requirements.
 - .3 Specific pre-treatments noted herein or specified in the MPI Repainting Manual.
 - .4 Sealing / priming surfaces for repainting in accordance with MPI Repainting Manual requirements.
 - .5 Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile / flammable materials are being used.
- .3 Refer to drawings and schedules (e.g., Finish Schedule) for type, location and extent of interior repainting required, and include all touch-ups necessary to complete work shown, scheduled or specified.

1.4. REFERENCES:

- .1 The latest edition of the following reference standards shall govern all repainting work:
 - .1 Architectural Painting Specification Manual by the Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List. (hereafter referred to as the MPI Painting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.
 - .2 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).
 - .3 National Fire Code of Canada.

1.5. QUALITY ASSURANCE:

- .1 This Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested, Contractor shall provide a list of the last three comparable interior repainting jobs including, name and location, specifying authority / project manager, start / completion dates and value of the painting work.
- .2 Only qualified journeypersons, as defined by local jurisdiction shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
- .3 All materials, preparation and workmanship shall conform to requirements of the latest edition of the Architectural Painting Specification Manual by the Master Painters Institute (MPI) (hereafter referred to as the MPI Painting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.

- .4 All interior repainting work shall be inspected by a Paint Inspection Agency (inspector) acceptable to the specifying authority and the local MPI Accredited Quality Assurance Association. The painting contractor shall notify the Paint Inspection Agency a minimum of one week prior to commencement of work and provide a copy of the project painting specification, plans and elevation drawings (including pertinent details) as well as a Finish Schedule.
 - .5 All surfaces requiring repainting shall be inspected by the Paint Inspection Agency who shall notify the Consultant and General Contractor in writing of any defects or problems, prior to commencing repainting work, or after the preparation work.
- 1.6. REGULATORY REQUIREMENTS:**
- .1 Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.
 - .2 Conform to safety precautions in accordance with the latest requirements to Industrial Health and Safety Regulations, latest edition, of authorities having jurisdiction.
 - .3 Notify the Paint Inspection Agency on award of contract and make application for assignment of an Inspector using appropriate forms supplied by the Agency as well as provide a copy of the project repainting specification, drawings, color schedule and list of proposed materials for review purposes prior to commencement of work.
 - .4 Fully cooperate at all times with the requirements of the Paint Inspection Agency in the performance of their duties, including providing access and assistance as required to complete inspection work.
- 1.7. MOCK-UPS:**
- .1 When requested by the Consultant or Paint Inspection Agency, prepare and repaint designated surface, area, room or item to requirements specified herein, with specified paint or coating showing selected colors, gloss / sheen, textures and workmanship to MPI Painting Manual standards for review and approval. When approved, surface, area, room and/or items shall become acceptable standard of finish quality and workmanship for similar on-site work.
- 1.8. SUBMITTALS:**
- .1 All submittals shall be in accordance with the requirements of Section 01340 – Shop Drawings.
 - .2 Submit consent of surety with Bid Submission as proof of ability to supply a 100% two (2) year Maintenance Bond, if an MPI Accredited Quality Assurance Association's guarantee option is not used.
 - .3 If requested, submit a list of all painting materials to the Consultant and the Paint Inspection Agency for review prior to ordering materials. If requested, provide an invoice list of all paint materials ordered for project work to Paint Inspection Agency indicating manufacturer, types and quantities for verification and compliance with specification and design requirements.
 - .4 Submit two sets of Material Safety Data Sheets (MSDS) prior to commencement of work for review and for posting at job site as required.
 - .5 If requested, submit work schedule for various stages of work when repainting occupied areas for the Consultant's review and Owner's approval.
 - .6 At project completion provide an itemized list complete with manufacturer, paint type and color coding for all colors used for Owner's later use in maintenance.
 - .7 At project completion provide properly packaged maintenance materials as noted herein and obtain a signed receipt.
- 1.9. PRODUCT DELIVERY, STORAGE AND HANDLING:**
- .1 Deliver all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
 - .2 Store all paint materials in original labeled containers in a secure (lockable), dry, heated and well ventilated single designated area meeting the minimum requirements of both paint

manufacturer and authorities having jurisdiction and at a minimum ambient temperature of 45° F (7° C). Only material used on this project to be stored on site.

- .3 Where toxic and/or volatile / explosive / flammable materials are being used, provide adequate fireproof storage lockers and take all necessary precautions and post adequate warnings (e.g. no smoking) as required.
- .4 Take all necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) shall be stored in suitable closed and rated containers and removed from the site on a daily basis.
- .5 Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.

1.10. PROJECT / SITE REQUIREMENTS:

- .1 UNLESS specifically pre-approved by the specifying body, Paint Inspection Agency and the applied product manufacturer, perform no interior repainting work when interior ambient air and substrate temperatures and humidity level exceeds manufacturer's stated limits.
- .2 Perform no interior repainting work unless adequate continuous ventilation and sufficient heating facilities are in place to maintain minimum ambient air and substrate temperatures for 24 hours before, during and after paint application. Provide supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements. Because of moisture generation and potential fire hazard, the use of gas fired heating units is not advised, unless otherwise approved by the Owner / Consultant and authorities having jurisdiction.
- .3 Test suspect surfaces (concrete, masonry, plaster and wood surfaces) for moisture and alkalinity as required. Conduct all moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple "cover patch test". The maximum moisture shall not exceed:
 - .1 15% for wood.
 - .2 12 % for plaster and gypsum board.
- .4 Perform no repainting work unless a minimum lighting level of 323 Lux (30 foot candles) is provided on surfaces to be repainted. Adequate lighting facilities shall be provided by the General Contractor.
- .5 Apply paint only to dry, clean, and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.

1.11. SCHEDULING:

- .1 Schedule painting operations to prevent disruption of and by other trades.
- .2 Schedule painting operations in occupied facilities to prevent disruption of occupants in and about the building. Painting shall be carried out on weekends in accordance with Owner's operating requirements. Schedule work such that painted surfaces will have dried before occupants are affected. Obtain written authorization from Consultant / Owner for changes in work schedule.

1.12. WASTE MANAGEMENT AND DISPOSAL:

- .1 Paint, stain and wood preservative finishes and related materials (thinners, solvents, etc.) are regarded as hazardous products and are subject to regulations for disposal. Obtain information on these controls from applicable Provincial government departments having jurisdiction.
- .2 All waste materials shall be separated and recycled. Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility. Materials that cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.
- .3 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.

- .4 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground the following procedures shall be strictly adhered to:
 - .1 Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
 - .2 Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
 - .3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
 - .4 Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
 - .5 Empty paint cans are to be dry prior to disposal or recycling (where available).
 - .6 Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.
 - .5 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.
- 1.13. GUARANTEE:**
- .1 Furnish either the local MPI Accredited Quality Assurance Association's two (2) year guarantee, or, alternatively, a 100% two (2) year Maintenance Bond - both in accordance with MPI Repainting Manual requirements. The Maintenance Bond shall warrant that all painting work has been performed in accordance with MPI Painting Manual requirements.
 - .2 All painting and decorating work shall be in accordance with MPI Painting Manual requirements and shall be inspected by the local MPI Accredited Quality Assurance Association's Paint Inspection Agency (inspector), whether using either the MPI Accredited Quality Assurance Association's guarantee, or the Maintenance Bond option. The cost for such inspections, and for either the local MPI Accredited Quality Assurance Association's Guarantee, or the Maintenance Bond, shall be included in the Base Bid Price.
 - .3 Painting Subcontractors choosing the Maintenance Bond option shall provide a maintenance bond consent from a reputable surety company licensed to do business in Canada.
- 1.14. MAINTENANCE MATERIALS:**
- .1 At project completion provide 4 liters (1 gallon) of each type and color of paint from same production run (batch mix) used in unopened cans, properly labeled and identified for Owner's later use in maintenance. Store where directed.
- PART 2: PRODUCTS**
- 2.1. MATERIALS**
- .1 Only materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, etc.) listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project. All such material shall be from a single manufacturer for each system used.
 - .2 Other materials such as linseed oil, shellac, thinners, solvents, etc. shall be the highest quality product of an MPI listed manufacturer and shall be compatible with paint materials being used as required.
 - .3 All materials used shall be lead and mercury free and shall have low VOC content where possible.
 - .4 Where required, use only materials having a minimum MPI "Environmentally Friendly" E1 rating based on VOC (EPA Method 24) content levels.
 - .5 Where indoor air quality (odour) is an issue, use only MPI listed materials having a minimum E2 rating.
 - .6 All paint materials shall have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc. Refer to 3.7, Field Quality Control / Standard of Acceptance requirements.

- .7 Where required, paints and coatings shall meet flame spread and smoke developed ratings designated by local Code requirements and/or authorities having jurisdiction.
- 2.2. EQUIPMENT:**
 - .1 Painting Equipment: to best trade standards for type of product and application.
 - .2 Spray-Painting Equipment: of ample capacity, suited to the type and consistency of paint or coating being applied and kept clean and in good working order at all times.
- 2.3. MIXING AND TINTING:**
 - .1 Unless otherwise specified herein or pre-approved, all paint shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.
 - .2 Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.
 - .3 Where thinner is used, addition shall not exceed paint manufacturer's recommendations. Do not use kerosene or any such organic solvents to thin water-based paints.
 - .4 If required, thin paint for spraying according in strict accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Consultant.
- 2.4. FINISH AND COLORS:**
 - .1 Unless otherwise specified herein, all repainting work shall be in accordance with MPI Premium Grade finish requirements.
 - .2 Colors shall be as selected by the Consultant from a manufacturer's full range of colors. A Finish Schedule will be furnished after award of the Contract.
 - .3 Generally and unless otherwise specified herein or noted on Finish Schedules the quantity of colors and finishes shall be based on the following criteria:
 - .1 Interior colors will be based on five (5) base colors and three (3) accent colors with a maximum of three (3) deep or bright colors. No more than eight (8) colors will be selected for the entire project and no more than three (3) colors will be selected in each area. Note that this does not include pre-finished items by others, e.g. aluminum or vinyl windows, aluminum doors and handrails, etc.
 - .2 Interior colors and/or patterns shall be consistent with a maximum of three (3) separate schemes prepared.
 - .3 Ceilings (except those having a spray textured coating) shall be painted white.
 - .4 Except as noted herein or indicated on the Finish Schedule, interior walls and ceiling surfaces shall be painted in accordance with the following criteria over appropriate prime / sealer coat:
 - .1 all masonry surface areas (except as noted): washable latex with G5 (semi-gloss) finish.
 - .2 all gypsum board surface areas (except as noted): washable latex with G4 (satin) finish.
 - .3 laundry facilities / rooms, washrooms,: washable latex with G5 (semi-gloss) finish.
 - .4 "clean" or "sanitary" areas such as food preparation and laboratory areas: epoxy (tile-like) G5 (semi-gloss) finish for dry surfaces.]
 - .5 Doors shall be painted a different color than door frames with walls a different color than either. Unless otherwise noted or scheduled all doors, frames and trim shall be painted using a G5 (semi-gloss) finish.
 - .6 Access doors, prime coated butts and other prime painted hardware (e.g. door closers), registers, radiators and covers, exposed piping and electrical panels shall be painted to match adjacent surfaces (i.e. same color, texture and sheen), unless otherwise noted or where pre-finished.
 - .7 Plywood service panels (e.g. electrical, telephone and cable vision panels) including edges shall be back-primed and painted to match painted wall mounted on.
 - .8 The inside of light valances shall be painted gloss white.

- .9 The inside of all duct work behind louvers, grills and diffusers for a minimum of 460 mm (18") or beyond sight line, whichever is greater, shall be painted using flat black (non-reflecting) paint.
- .10 Low headroom areas shall be identified with minimum 100 mm (4") wide yellow band on leading edge marked "CAUTION _ LOW CLEARANCE" in 50 mm (2") high black letters at suitable intervals and/or in accordance with the requirements or authorities having jurisdiction.
- .11 Where other methods are not specified (i.e. applied material or nosings) and/or in accordance with the requirements or authorities having jurisdiction at stairs providing access and exit for persons with visual impairment, slip resistant paint shall be applied to handrails and treads. Slip resistant paint shall be of a contrasting color at tactile warning strips at stair treads and landings.

2.5. GLOSS / SHEEN RATINGS:

- .1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with the following MPI values:

Gloss Level	Description	Units@ 60 degrees	Units@ 85 degrees
G1	Matte or Flat finish	0 to 5	10 max.
G2	Velvet finish	0 to 10	10 to 35
G3	Eggshell finish	10 to 25	10 to 35
G4	Satin finish	20 to 35	35 min.
G5	Semi-Gloss finish	35 to 70	
G6	Gloss finish	70 to 85	
G7	High-Gloss finish	> 85	

- .2 Gloss level ratings of all painted surfaces shall be as specified herein and as noted on Finish Schedule.

PART 3: EXECUTION

3.1. CONDITION OF SURFACES:

- .1 Prior to commencement of work of this section, thoroughly examine (and test as required) all conditions and surfaces scheduled to be repainted and report in writing to the Contractor and Consultant any conditions or surfaces that will adversely affect work of this section.
- .2 The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the **MPI** Maintenance Repainting Manual. In general the **MPI** DSD ratings and descriptions are as follows:

Condition	Description
DSD-0	Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
DSD-1	Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).
DSD-2	Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
DSD-3	Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
DSD-4	Substrate Damage (repair or replacement of surface required by others).

- .3 Other than the repair of DSD-1 to DSD-3 defects included under this scope of work, structural and DSD-4 substrate defects discovered prior to and after surface preparation or

after first coat of paint shall be made good and sanded by others ready for painting, unless otherwise agreed to by the Owner and painter to be included in this Work.

- .4 No repainting work shall commence until all such DSD-4 adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Painting Subcontractor. The Painting Subcontractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate, which may adversely affect the painting work except for minimal work normally performed by the Painting Subcontractor and as, indicated herein. It shall always, however, be the responsibility of the Painting Subcontractor to see that surfaces are properly prepared before any paint or coating is applied. It shall also be the Painting Subcontractor's responsibility to paint the surface as specified providing that the owner accepts responsibility for uncorrected DSD-4 substrate conditions.

3.2. **PREPARATION OF SURFACES:**

- .1 Prepare all surfaces in accordance with MPI requirements. Refer to the MPI Painting Manual in regard to specific requirements.
- .2 Sand, clean, dry, etch, neutralize and/or test all surfaces under adequate illumination, ventilation and temperature requirements.
- .3 Remove and securely store all miscellaneous hardware and surface fittings / fastenings (e.g. electrical plates, mechanical louvers, door and window hardware (e.g. hinges, knobs, locks, trim, frame stops), removable rating / hazard / instruction labels, washroom accessories, light fixture trim, etc. from wall and ceiling surfaces, doors and frames, prior to repainting. Carefully clean and replace all such items upon completion of repainting work in each area. Do not use solvent or reactive cleaning agents on items that will mar or remove finishes (e.g. lacquer finishes). Doors shall be removed before painting to paint bottom and top edges and then re-hung.
- .4 Protect all adjacent interior surfaces and areas, including rating and instruction labels on doors, frames, equipment, piping, etc., from repainting operations and damage with drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.

3.3. **APPLICATION:**

- .1 Do not commence repainting unless substrates are acceptable and until all environmental conditions (heating, ventilation, lighting and completion of other subtrade work, if applicable) are acceptable for applications of products.
- .2 Apply primer, paint or stain in accordance with MPI Painting Manual Premium Grade finish requirements.
- .3 Apply primer, paint or stain in a workmanlike manner using skilled and trade qualified applicators as noted under Quality Assurance.
- .4 Apply primer, paint or stain within an appropriate time frame after cleaning when environmental conditions encourage flash-rusting, rusting, contamination or the manufacturer's paint specifications require earlier applications.
- .5 Primer, paint or stain coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .6 Tint each coat of paint progressively lighter to enable confirmation of number of coats.
- .7 Unless otherwise approved by the painting inspection agency, apply a minimum of four coats of paint where deep or bright colors are used to achieve satisfactory results.
- .8 Sand and dust between each coat to provide an anchor for next coat and to remove defects in previous coat (runs, sags, etc.) visible from a distance up to 1000 mm (39").
- .9 Do not apply finishes on interior surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.
- .10 To avoid air entrapment in applied coats, apply materials in strict accordance with manufacturer's spread rates and application requirements.

3.4. INTERIOR FINISH / COATING SYSTEMS:

- .1 Paint interior surfaces in accordance with the following MPI Painting Manual requirements:
 - .1 Concrete Horizontal Surfaces: (floors and stairs)
 - .1 RIN 3.2E Concrete floor sealer.
 - .2 Concrete Masonry Units: (smooth and split face block and brick)
 - .1 RIN 4.2A Latex G5 finish.
 - .2 RIN 4.2D Epoxy finish.
 - .3 Structural Steel and Metal Fabrications: (columns, beams, joists, etc.)
 - .1 RIN 5.1E Alkyd G5 finish.
 - .4 Steel - High Heat: (boilers, furnaces, heat exchangers, breeching, pipes, flues, stacks, etc., with temperature range as noted)
 - .1 RIN 5.2A Heat resistant enamel finish, maximum 400° F (205° C).
 - .2 RIN 5.2B Heat resistant aluminum paint finish, maximum 800° F (427° C).
 - .3 RIN 5.2C Inorganic zinc rich coating, maximum 750° F (400° C).
 - .4 RIN 5.2D High heat resistant coating, maximum 1100° F (593° C).
 - .5 Galvanized Metal: (doors, frames, railings, misc. steel, pipes, overhead decking, ducts, etc.)
 - .1 RIN 5.3A Latex G6 finish.
 - .6 Dressed Lumber: (including doors, door and window frames, casings, molding, etc. where painted)
 - .1 RIN 6.3A Latex semi-gloss finish (over alkyd undercoat).
 - .2 RIN 6.3K Polyurethane varnish G5 finish.
 - .3 RIN 6.3U Latex semi-gloss finish (over latex primer).
 - .7 Wood Casework: (shelving, millwork, etc. where painted)
 - .1 RIN 6.3A Latex semi-gloss finish (over alkyd undercoat).
 - .2 RIN 6.3K Polyurethane varnish G5 finish.
 - .3 RIN 6.3U Latex semi-gloss finish (over latex primer).
 - .8 Plaster and Gypsum Board: (gypsum wallboard, drywall, "sheet rock type material", etc., and textured finishes)
 - .1 RIN 9.2B High performance architectural latex G4 finish.
 - .2 RIN 9.2D Epoxy finish.
 - .9 Canvas and Cotton Coverings:
 - .1 RIN 10.1A Latex G3 finish.

3.5. MECHANICAL / ELECTRICAL EQUIPMENT AND RELATED SURFACES:

- .1 Unless otherwise noted, repainting shall also include exposed to view / previously painted mechanical and electrical equipment and components (panels, conduits, piping, hangers, ductwork, etc.).
- .2 Touch up scratches and marks and repaint such mechanical and electrical equipment and components with colour, and sheen finish to match existing unless otherwise noted or scheduled.
- .3 Do not paint over name plates or instruction labels.
- .4 Leave unfinished exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish.
- .5 Keep repainted sprinkler heads free of paint.
- .6 Do not paint interior transformers and substation equipment.

3.6. FIELD QUALITY CONTROL / STANDARD OF ACCEPTANCE:

- .1 All surfaces, preparation and paint applications shall be inspected.
- .2 Repainted interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Painting Inspection Agency inspector:
 - .1 brush / roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.

- .2 evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - .3 damage due to touching before paint is sufficiently dry or any other contributory cause.
 - .4 damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - .5 damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).
 - .3 Repainted surfaces shall be considered unacceptable if any of the following are evident under natural lighting source for exterior surfaces and final lighting source (including daylight) for interior surfaces:
 - .1 visible defects are evident on vertical surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39").
 - .2 visible defects are evident on horizontal surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39").
 - .3 visible defects are evident on ceiling, soffit and other overhead surfaces when viewed at normal viewing angles.
 - .4 when the final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
 - .4 Repainted surfaces rejected by the inspector shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas or areas without sufficient dry film thickness of paint shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.
- 3.7. PROTECTION:**
- .1 Protect all interior surfaces and areas, including glass, aluminum surfaces, etc. and equipment and any labels and signage from painting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
 - .2 Erect barriers or screens and post signs to warn of or limit or direct traffic away or around work area as required.
- 3.8. CLEAN-UP:**
- .1 Remove all paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
 - .2 Keep work area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.
 - .3 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
 - .4 Clean equipment and dispose of wash water / solvents as well as all other cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, paint removers / strippers in accordance with the safety requirements of authorities having jurisdiction.

END OF INTERIOR REPAINTING

PART 1: GENERAL

1.1. GENERAL REQUIREMENTS

- .1 Conform to all applicable sections of Division 1.

1.2. WORK INCLUDED

- .1 Toilet Compartments
- .2 Compartment installation and hardware.

1.3. RELATED SECTIONS

- .1 Section 10800 - Washroom Accessories.

1.4. SUBMITTALS

- .1 Submit under provisions of Section 01300.
- .2 Product Data: Manufacturer's printed literature on each product to be used, including:
 - .1 Printed information indicating typical panel, pilaster, door, hardware and fastening.
 - .2 Preparation instructions.
 - .3 Storage and handling requirements.
 - .4 Installation instructions.
- .3 Shop Drawings: Submit six sets of the following:
 - .1 Dimensioned plans indicating layout of toilet compartments.
 - .2 Dimensioned elevations indicating heights of doors, pilasters, dividing panels, and other components; indicate locations and sizes of openings in compartment dividing panels for toilet and bath accessories to be installed in partitions; indicate floor and ceiling clearances.
 - .3 Details indicating anchoring components and methods for project conditions; indicate components required for installation, but not supplied by toilet compartment manufacturer.
- .4 Samples: Two manufacturer's color cards representing manufacturer's full color palette.

1.5. DELIVERY, STORAGE AND HANDLING

- .1 Store compartment components until installation in unopened cartons laid flat, with adequate support to ensure flatness and to prevent damage to prefinished surfaces.
- .2 Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- .3 Do not store material where ambient temperature exceeds 120 degrees F (49 degrees C).

1.6. ENVIRONMENTAL REQUIREMENTS

- .1 Do not deliver materials or begin construction activities of this section until building is enclosed, with complete protection from outside weather.

1.7. WARRANTY

- .1 Phenolic Material: Against delamination, breakage, or corrosion for 10 years, assuming proper maintenance according to manufacturer's recommendations.

PART 2: PRODUCTS

2.1. MANUFACTURERS

- .1 Acceptable Manufacturer: Global Partitions, which is located at: 2171 Liberty Hill Rd. ; Eastanoller, GA 30538; Tel: 706-827-2700; Fax: 207-827-2710; Email: request info; Web: www.globalpartitions.com
- .2 Equivalent products from the following manufacturers will also be acceptable;
 - .1 Bobrick
 - .2 Hadrian Inc.
 - .3 Ampco Products Inc.

2.2. COMPARTMENTS AND SCREENS

- .1 Toilet Compartments: Floor anchored/overhead braced.
 - .1 Compartment Depth and Width: As indicated on drawings.

- .2 Door Width: 915mm for BF compartments, 660mm otherwise.
- .3 Height Above Floor: 305 mm.
- .4 Door Height: 1473 mm.
- .5 Pilaster Height: 2108 mm.

2.3. SOLID PHENOLIC COMPONENTS

- .1 Doors, Panels and Pilasters: Decorative paper face sheets, phenolic resin impregnated, bonded under heat and pressure, edges finished smooth; black core.
 - .1 Panel Thickness: 1/2 inch (13 mm), nominal.
 - .2 Door, Bench and Pilaster Thickness: 3/4 inch (19 mm), nominal.
- .2 Finish: Color selected from manufacturer's full color palette.
- .3 Door Hardware: Piano hinge.
 - .1 Hinges: Full height continuous piano hinge.
 - .2 Coat Hook and Bumper: Non-ferrous, chrome plated, break-away type with black rubber tip for doorstop.
 - .3 Fastening Hardware: Manufacturer's standard Type 304 stainless steel, No. 4 satin finish, with theft-resistant barrel nuts and machine screws.
- .4 Mounting Brackets: Stainless steel full-length continuous bracket Type 304 stainless steel, No. 4 satin finish, with stainless steel theft-resistant barrel nuts and machine screws of same material and finish.
- .5 Pilaster Shoes: Type 304 stainless steel, No. 4 satin finish.
- .6 Headrail: Manufacturer's standard anodized aluminum rail with anti-grip profile.
- .7 Pilaster Anchors, Floor Anchored/Overhead Braced: 1/4 inch (6 mm) by 1 inch (25 mm) steel mounting bar on floor, anchored with 3/8 inch (9.5 mm) steel anchors; leveling adjustment concealed by pilaster shoe after installation.

PART 3: EXECUTION

3.1. EXAMINATION

- .1 Verification of Conditions:
 - .1 Measure areas to receive compartments; verify area dimensions are in accordance with shop drawings.
 - .2 Verify built-in framing, anchorage, bracing, and plumbing fixtures are in correct location.
- .2 Installer's Examination:
 - .1 Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
 - .2 Transmit two copies of installer's report to Architect within 24 hours of receipt.
 - .3 Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2. PREPARATION

- .1 Surface Preparation:
 - .1 Prepare openings in compartment dividing panels for toilet and bath accessories to be installed in partitions; marring of partition finish is prohibited.
 - .2 Locate openings in accordance with shop drawings and accessory manufacturer's installation instructions and templates.

3.3. INSTALLATION

- .1 Install compartments to specified tolerances in accordance with shop drawings and manufacturer's printed installation instructions.
- .2 Attach components to adjacent materials and to other components using purpose-designed fastening devices.
- .3 Adjust pilaster anchors for floor or ceiling variations, as applicable; conceal anchors with pilaster shoes.

- .4 Fit each compartment door with hinges and door latch.
- .5 Install door strike keeper on pilasters in alignment with door latch.
- .6 Fit each compartment door with one break-away style coat hook and bumper.
- .7 Installation Tolerances:
 - .1 Maximum variation from plumb or level: 1/8 inch (3 mm).
 - .2 Clearance between wall surface and panels or pilasters: 1-1/2 inch (38 mm) maximum.

3.4. ADJUSTING

- .1 Adjust door hardware for uniform clearance between doors and pilasters.
- .2 Adjust door hinges to attain free movement.
- .3 Adjust door hardware to align door strike keeper on each pilaster with door latch.

3.5. PROTECTION OF INSTALLED PRODUCTS

- .1 Prevent damage to product finishes by subsequent construction activities.
- .2 Touch up, repair, or replace components having damaged finish before Substantial Completion.
- .3 Remove factory protective coverings and clean finish surfaces in accordance with manufacturer's instructions before final inspection.

END OF TOILET PARTITIONS

PART 1: GENERAL

1.1. RELATED WORK

- .1 Hand Dryers: supplied and installed by Division 16.

1.2. SHOP DRAWINGS

- .1 Submit shop drawings or catalogue illustrations in accordance with Section 01300.

PART 2: PRODUCTS

2.1. MATERIALS

- .1 Stainless steel sheet metal: to ASTM A167-82, Type No. 304, with No. 4 satin finish.
- .2 Stainless steel tubing: Type No. 304, commercial grade, seamless welded, 1.2 mm wall thickness.
- .3 Fasteners: concealed screws and bolts, hot dip galvanized exposed fasteners to match face of unit. Expansion shields: fibre, lead or rubber as recommended by accessory manufacturer for component and its intended use.

2.2. FINISHES

- .1 Chrome and nickel plating: to ASTM B456-79 satin finish.

2.3. FIXTURES

- .1 Accessories based on models from Bobrick. Products from other manufacturers are acceptable if specifications are equal:
 - .1 Toilet tissue dispenser (TT): supplied by Owner, mounted by this Section.
 - .2 Soap dispenser (SD): supplied by Owner, mounted by this Section.
 - .3 Napkin dispenser (ND): supplied by Owner, mounted by this Section.
 - .4 Napkin disposal (SND): supplied by Owner, mounted by this Section.
 - .5 Shelf: Stainless steel surface mounted utility shelf **Model B-295 x 18**.
 - .6 Clothes Hook: supplied by Owner, mounted by this Section.
 - .7 Mirrors (M): surface mounted, welded stainless steel frame, tempered glass – 460mm w x 910mm h with concealed vandal proof mounting, **Model B-2908 1836**.
 - .8 Grab bars (GB): 38mm dia. X 1.2mm wall tubing of stainless steel, 38mm dia, wall flanges, concealed screw attachment, flanges welded to tubular bar, provided with steel back plates and all accessories. Knurl bar to area of hand grips. Grab bar material and anchorage to withstand downward pull of 2.2 kN. (1) **Model B-6806.99** and (1) **Model B-6898.99** at each barrier-free water closet. Ensure grab bars are in full compliance with accessibility requirements of the Ontario Building Code. Length of bars may have to be adjusted to suit.
 - .9 Hand Dryer: by Electrical.

2.4. FABRICATION

- .1 Shop assemble components and package complete with anchors and fittings.
- .2 Deliver inserts and rough in frames to job site at appropriate time for building in. Provide templates, details and instructions for building in anchors and inserts.
- .3 Provide steel anchor plates and components for installation on studding and building framing.

PART 3: EXECUTION

3.1. INSTALLATION

- .1 Install and secure accessories rigidly in place using manufacturer's recommended anchoring systems.
- .2 Provide necessary reinforcement for grab bars for 227 kg (500lbs) downward pull. Install grab bars on built-in anchors provided by the manufacturer.
- .3 Use tamper proof screws/bolts for fasteners.
- .4 Fill units with necessary supplies shortly before final acceptance of building.

3.2. LOCATION AND QUANTITY

- .1 Note that Contractor is to install all accessories, including those supplied by Owner.
- .2 Locate accessories where indicated and as follows: Exact locations determined by Consultant.
 - .1 Toilet tissue dispenser: one (1) adjacent to each water closet.
 - .2 Soap dispenser: one (1) at each lavatory sink.
 - .3 Mirrors: one (1) in each washroom located where indicated.
 - .4 Napkin dispenser: as indicated on the drawings.
 - .5 Napkin disposal: one (1) per female washroom stall.
 - .6 Grab Bars: at each BF stall and washroom and/or as indicated on the drawings.
 - .7 Hand dryer: as indicated on the drawings.

END OF WASHROOM ACCESSORIES