Title

No. of Pages

PROJECT

Document No.

SIMCOE COUNTY DISTRICT SCHOOL BOARD, PARKING LOT UPGRADES WEST BAYFIELD ELEMENTARY SCHOOL, 49 FORD STREET, BARRIE, ON MARCH 2020 PROJECT NO. 12190T

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- 1 SCOPE OF WORK
- 1.1 Work covered under this Contract:
- 1.1.1 This is a single phase project slated for completion by as noted in the contract documents.
- 1.1.2 The following outline is a general description of the Work and is not a list of all components of work to be included:
 - .1 The intent of the new work is to increase the number of parking spaces as per the Drawings and Specifications. Work includes, removal of 3 trees, removal of landscaped/sodded area, removal of existing sidewalks, fences and gates and associated footings, new asphalt paving and concrete curbs, line painting for parking spaces including refreshing the existing lines and barrier-free parking spaces, new chain link gate, planting 6 new trees. Landscaped area must be reinstated and sodded in all areas affected by new work and removals.
 - .2 Refer to Civil Engineering Drawings and Specifications for site grading information.
 - .3 A Cash Allowance of \$3,000 shall be carried for inspection and testing.

1.3 WORK SEQUENCE

- 1.3.1 It is understood that the work of this contract will be substantially complete by August 28, 2020 and constructed to accommodate Board's continued use of premises thereafter. Schedule and substantially complete all portions of Work for Board occupancy by this date.
- 1.3.2 The Contractor shall provide SCDSB with a complete plan or layout of their work schedule prior to commencing any work on SCDSB property.
- 1.3.3 The Contractor must report to the School Office before proceeding elsewhere on SCDSB property.
- 1.3.4 Co-ordinate and continually update Progress Schedule and co-ordinate with Board to accomplish expeditious completion of the work in a timely manner. Cooperate with the Board in scheduling operations to minimize conflict and to facilitate Board usage of the premises.
- 1.3.6 Maintain fire access/control at all times.

********END*******



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1. INTRODUCTION

1.1 INVITATION

1.1.1 Simcoe County District School Board (the "**Owner**") is soliciting Bids from prequalified electrical contractors to perform the work described in the Bid Documents (the "**Work**") at **West Bayfield Elementary School, 49 Ford Street, Barrie, 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 the Place of the Work on 17 March, 2020, commencing at 9:00 a.m.
 - (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) Questions must be submitted through the online portal www.bidsandtenders.ca
 - (e) Bids must be submitted online through the Portal **BEFORE 1:30:00PM** Local Time on **2 April, 2020** (the "**Submission Deadline**").
 - (f) Bids must be irrevocable for a period of ninety (90) days starting from the day after the Submission Deadline (the "**Irrevocability Period**").
 - (g) The form of bid security to be delivered as part of the Bid is a digital bond, no other form of bond is acceptable. Bids submitted without digital bond will be considered noncompliant
 - (h) The successful Bidder is permitted to commence work on site as of 2 July, 2020.
 - (i) The successful Bidder will be required to achieve Substantial Performance of the Work by 28 August, 2020.
 - (j) The Bid Coordinator is Justin Apokremiotis, Purchasing Supervisor, at "japokremiotis@scdsb.on.ca".

1.3 PREQUALIFICATION

1.3.1 The following Civil contractors are prequalified to submit a Bid (each a "**Prequalified Contractor**"):

Arnott Construction Limited Charles Morden Construction Inc. Coco Paving Inc Darpak Inc. Deciantis Contstruction Limited Dol Turf Restoration LTD Eisses Brothers Excavating Gateman-Milloy Inc. Georgian Paving Ltd.	 (705) 735-9121 (705) 526-5053 (705) 726-6424 (705) 428-3189 (905) 884-5131 (416) 791-3677 (705) 734-7000 (519) 748-6500 (705) 733-3336 	nigel@arnottgroup.com mordenconstruction@bellnet.ca bfraser@cocogroup.com dave@darpak.net john@deciantisconstruction.ca gdol@dolturf.com mike@eissesexcavating.com phersics@gatemanmilloy.com david.Jantzi@georgianpaving.ca
K.J Excavating	(705) 309-3857	kjexcavating@yahoo.ca



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Dufferin Construction Company Morris Shelswell & Sons Excavating &	(905) 842-2741	helen.gregor@ca.crh.com
Grading Ltd.	(705) 487-2215	excavating@morrisshelswell.com
Positano Paving Rutherford Contracting Ltd.	(705) 726-0100 (905) 726-4888	info@paving.ca tenders@ruthcon.ca
Silver Birch Contracting Ltd	(905) 952-3856	estimating@birchcon.ca

- 1.3.2 Not Used;
- 1.3.3 Not Used;
- 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.
- 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.



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- 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 Section 9.4 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(j).
- 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;
 - (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(f).
- 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.
- 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(e).



- 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
 - (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.
 - (d) Drawings.
 - (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.



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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.
- 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 (including questions) with the Owner permitted by this Bid Process are to be in writing and are to be submitted online through the Portal

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. All questions must be submitted through the Portal.



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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.

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) for Pre-Qualified **Civil** Contractors;
- 6.1.3 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



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relied upon in any way by a Bidder, except and only to the extent expressly confirmed in

(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

an addendum:

- 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' 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.



- (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;
 - (b) perform only investigations authorized by the Owner;
 - 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



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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.
- 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 <u>Bid Price</u>. 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 noncompliant.
 - (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.

- (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 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.

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.

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 <u>Agreement to Bond / Surety's Consent</u>. 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 0 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 Reserved.



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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 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.

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:

lowest Adjusted Bid Price

other Bidder's Adjusted Bid Price x 100 = 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.



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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;
 - (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 board reserves the right to disqualify a Bidder and reject a Tender on the basis of: (I) past performance on previous Contracts awarded by the Simcoe County District School Board; (II) other relevant information that arises during this RFT Process, or (III) information provided by references
- 12.2.3 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;
 - 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.



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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;
 - (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.



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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 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.



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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.
- 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



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 5.3.1 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."
- 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. Act

Act means the Construction Act (Ontario), as amended.

28. 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 the course of the Work 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 paper copy and PDF formats.

29. 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.

30. 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.

31. Install

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

32. 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 or work or other labour controversy which does, or might, affect the Work.



33. OHSA

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

34. Proper Invoice

Proper Invoice means an application for payment delivered by the Contractor to the Owner that fully complies with the requirements of GC 5.1A – PROPER INVOICE FOR PROGRESS PAYMENT and GC 5.6A – PROPER INVOICE FOR FINAL PAYMENT, as the case may be.

35. 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 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 as follows:
 - "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 as follows:
 - (a) amend paragraph 1.1.7.1 by changing the order of the first four bullet points so that, as reordered, the bullet points read as follows:
 - "1.1.7.1 the order of priority of documents, from highest to lowest, shall be
 - Supplementary Conditions,
 - the Agreement between the Owner and the Contractor,
 - the Definitions,
 - the General Conditions"
 - (b) add to the end of paragraph 1.1.7 the following:

"Notwithstanding the foregoing, if there is a conflict or discrepancy between Drawings or between Drawings and Specifications 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 partial 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:

"If, in the opinion of the Contractor, a Supplemental Instruction involves an adjustment to 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 to 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 or deficiencies identified as priorities by the Owner or the Consultant."



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 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 forthwith 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."



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 provided 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 two (2) week look-ahead schedule indicating the major activities to be undertaken or constructed in such two (2) week period."
- 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, or if the Contractor has so advised the Consultant pursuant to paragraph 3.5.1.3, the Contractor shall take appropriate steps, at the Contractor's own expense, 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, for review and approval, a recovery plan demonstrating how the Contractor will achieve the recovery of the Construction Schedule.
 - 3.5.3 If after applying the expertise and resources required under paragraphs 3.5.1.2 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."

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."



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 as follows:
 - (a) by deleting the words "before signing the Contract" in the third line of that paragraph; and
 - (b) 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 shall accept the assignment of any contract procured by the Owner for Work or Products required on the Project that has been pretendered or pre-negotiated by or on behalf of 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 3.8.8 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. Immediately upon receipt of the Owner's order, the Contractor shall make arrangements to appoint a replacement representative or employee acceptable to the Owner.
 - 3.8.8 Where the Work is being performed at or near an existing school during the school year, the Contractor shall, upon the Owner's request, provide to the Owner clear criminal background checks for 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 clear criminal background checks for any of their employees who will be providing work or services at the Place of the Work. The Owner shall have the unfettered and absolute right and discretion to order the Contractor to remove from the Project and replace, without cost to the Owner, any individual who is unable to comply with this paragraph."

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.
 - 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 entitle the Contractor to an adjustment in the Contract Time or Contract Price, nor shall it relieve the Contractor of any of its obligations under the Contract, including the Contractor's designation and obligations as "constructor" under OHSA, and the Contractor's obligations respecting construction health and safety 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."



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 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
 - 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 5.1A PROPER INVOICE FOR PROGRESS PAYMENT

3.22.1 Add a new GC 5.1A as follows:

"GC 5.1A PROPER INVOICE FOR PROGRESS PAYMENT

- 5.1A.1 In this Contract a Proper Invoice for progress payment shall mean an application for payment made by the Contractor that:
 - .1 is delivered to the Owner via email to both <u>fservices@scdsb.on.ca</u> and the specified Project Coordinator as well as to the Prime Consultant. If an invoice is received after 4:00 PM it is deemed to have been received on the next business day; and it is noted that any invoice received prior to the last day of the month for which the invoice is for it is not deemed to have been received until the last day of the month.
 - .2 includes all of the following:
 - .1 the Contractor's name and address and HST registration number;
 - .2 the date of the application for payment and the period during which the services or materials were supplied;
 - .3 information identifying the authority, whether in the Contract or otherwise, under which the services or materials were supplied;
 - .4 a description, including quantities where appropriate, of the services and materials that were supplied;
 - .5 the amount payable for the services or materials that were supplied, and the payment terms;
 - .6 the name, title, telephone number and mailing address of the person to whom payment is to be sent;
 - .7 where the invoice amount includes amounts charged on the basis of hourly rates, documentation in support of the amount claimed, including dates that services were performed, identity of the



person(s) involved, the hours spent, and a description of the services performed;

- .8 copies of any Change Orders for which the Contractor is claiming payment, together with all backup documents;
- .9 a statement based on the schedule of values for the Work;
- .10 a current valid clearance certificate issued by the WSIB;
- .11 certificates of insurance confirming the placement of the insurance coverage required by this Contract;
- .12 for the second and all subsequent applications for payment, a CCDC 9A Statutory Declaration stating that all accounts for services and materials and other indebtedness incurred by the Contractor for which the Owner may in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified matter in dispute;
- .13 in respect of any subcontract whose value exceeds \$100,000, a statutory declaration in form CCDC 9B 2001;
- .14 an updated Construction Schedule in accordance with paragraph 3.5.1.3 of GC 3.5 CONSTRUCTION SCHEDULE."

SC3.23 GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

- 3.23.1 Delete paragraph 5.2.1 and replace it with the following:
 - "5.2.1 Proper Invoices for progress payment may be made monthly as the Work progresses."
- 3.23.2 Delete paragraph 5.2.2.
- 3.23.3 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

"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."

- 3.23.4 Delete paragraph 5.2.4 and replace it with the following:
 - "5.2.4 The Contractor shall, within 10 Working Days after Contract signing submit to the Consultant, for the Consultant's approval, a schedule of values for the parts of the Work aggregating the total amount of the Contract Price, so as to facilitate evaluation of applications for payment. Such schedule of values:
 - .1 shall include a detailed breakdown of the Work; and
 - .2 shall include a line item which assigns an appropriate portion of the Contract Price for quality control and closeout of the Work."



3.23.5 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 13.2 – OWNERSHIP OF MATERIALS."

SC3.24 GC 5.3 PROGRESS PAYMENT

- 3.24.1 Delete paragraph 5.3.1 and replace it with the following:
 - "5.3.1 The Consultant will issue to the Owner and copy to the Contractor, no later than 10 calendar days after the date the Owner receives a Proper Invoice for progress payment, a certificate for payment in the amount applied for, or in such other amount as the Consultant determines to be properly due.
 - 5.3.2 Subject to the Owner's right to give notice of non-payment in accordance with the Act, and subject to the holdback provisions of the Act, the Owner will pay the amount payable under a Proper Invoice for progress payment no later than 28 days after the date the Owner receives the Proper Invoice. Provided that the Owner's obligation to make payment shall not arise unless and until the Contractor's application for payment constitutes a complete Proper Invoice as provided in GC 5.1A PROPER INVOICE FOR PROGRESS PAYMENT. For certainty, and without limitation, the Owner may refuse to pay all or any portion of an application for progress payment where:
 - .1 the application does not comply with all of the requirements of a Proper Invoice in GC 5.1A – PROPER INVOICE FOR PROGRESS PAYMENT; and/or
 - .2 the amount applied for exceeds the amount stated in the certificate for payment issued by the Consultant pursuant to paragraph 5.3.1.
 - 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."

SC3.25 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

- 3.25.1 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 (excluding the As-Built Drawings), 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 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 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 documents and materials are delivered.
- 5.4.6 Within 25 days after 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.
- 5.4.7 Should any documents or materials not be delivered in accordance with paragraph 5.4.4 or 5.4.6 by the earlier of: (1) 60 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 retained by 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."

SC3.26 GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- 3.26.1 Delete paragraphs 5.5.3, 5.5.4 and 5.5.5 and replace them with the following:
 - "5.5.3 Subject to the Owner's right to give notice of non-payment of holdback in accordance with the Act, the Owner will pay the amount authorized by the certificate for payment of the holdback amount in accordance with the



provisions of the Act. For certainty, and without limitation, the Owner may refuse to pay a portion of the holdback where the Owner is entitled to deduct and retain amounts in accordance with paragraphs 5.4.5, 5.4.6 and/or 5.4.7."

SC3.27 GC 5.6A PROPER INVOICE FOR FINAL PAYMENT

3.27.1 Add a new GC 5.6A as follows:

"GC 5.6A PROPER INVOICE FOR FINAL PAYMENT

- 5.6A.1 In this Contract a Proper Invoice for final payment shall mean an application for final payment made by the Contractor that:
 - .1 is delivered to the Owner via email to both <u>fservices@scdsb.on.ca</u> and the specified Project Coordinator as well as the Prime Consultant. If an invoice is received after 4:00 PM it is deemed to have been received on the next business day and it is noted that any invoice received prior to the last day of the month for which the invoice is for it is not deemed to have been received until the last day of the month.
 - .2 includes all of the following:
 - .1 the Contractor's name and address and HST registration number;
 - .2 the date of the application for payment and the period during which the services or materials were supplied;
 - .3 information identifying the authority, whether in the Contract or otherwise, under which the services or materials were supplied;
 - .4 a description, including quantities where appropriate, of the services and materials that were supplied;
 - .5 the amount payable for the services or materials that were supplied, and the payment terms;
 - .6 the name, title, telephone number and mailing address of the person to whom payment is to be sent;
 - .7 where the invoice amount includes amounts charged on the basis of hourly rates, documentation in support of the amount claimed, including dates that services were performed, identity of the person(s) involved, the hours spent, and a description of the services performed;
 - .8 copies of any Change Orders for which the Contractor is claiming payment, together with all backup documents;
 - .9 a statement based on the schedule of values for the Work;
 - .10 a current valid clearance certificate issued by the WSIB;
 - .11 certificates of insurance confirming the placement of the insurance coverage required by this Contract;
 - .12 for the second and all subsequent applications for payment, a CCDC 9A Statutory Declaration stating that all accounts for services and



materials and other indebtedness incurred by the Contractor for which the Owner may in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified matter in dispute;

.13 in respect of any subcontract whose value exceeds \$100,000, a statutory declaration in form CCDC 9B – 2001."

SC3.28 GC 5.7 FINAL PAYMENT

- 3.28.1 Delete paragraph 5.7.1 and replace it with the following:
 - "5.7.1 When the Contractor considers that the Contract is completed, the Contractor shall deliver to the Owner a Proper Invoice for final payment, as provided in paragraph 5.6A.1 of GC 5.6A PROPER INVOICE FOR FINAL PAYMENT."
- 3.28.2 Amend paragraph 5.7.2 by adding the following to the end of that paragraph:

"Without limiting the generality of the foregoing, the application for final payment 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 5.4.6 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK have been received and accepted by the Consultant."

- 3.28.3 Delete paragraph 5.7.4 and replace it with the following:
 - "5.7.4 Subject to the Owner's right to give notice of non-payment in accordance with the Act, the Owner will pay the amount payable under a Proper Invoice for final payment no later than 28 days after the date the Owner receives the Proper Invoice. Provided that the Owner's obligation to make payment shall not arise unless and until the Contractor's application for payment constitutes a complete Proper Invoice as provided in GC 5.6A – PROPER INVOICE FOR FINAL PAYMENT. For certainty, and without limitation, the Owner may refuse to pay all or any portion of an application for final payment where:
 - .1 the application does not comply with all of the requirements of a Proper Invoice in GC 5.6A – PROPER INVOICE FOR FINAL PAYMENT; and/or
 - .2 the amount applied for exceeds the amount stated in the certificate for payment issued by the Consultant pursuant to paragraph 5.7.3.
 - 5.7.5 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."



SC3.29 GC 5.8 WITHHOLDING OF PAYMENT

- 3.29.1 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 of any amount claimed in an application for payment, in a Proper Invoice, or in 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 the Contractor's failure to perform any of its material obligations under this Contract in a timely manner or at all.
 - 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."

SC3.30 GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

3.30.1 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 damages or additional payment under this Contract or a claim for an 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 shall 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 (including email) direction agreeing to the change, 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."

3.30.2 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."



SC3.31 GC 6.2 CHANGE ORDER

3.31.1 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."

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; or
 - .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	<u>Column A</u> Subcontractor Mark- Up on Material and Products only	<u>Column B</u> 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 percentage fee mark-ups described in paragraph 6.2.3.3 are intended to cover all profit, 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, head office and head office personnel costs, supervision, project management, general account items, small tools, estimating, safety, preparation of As-Build Drawings, coordination and administration and 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 ad stated in a Change Order. 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."

SC3.32 GC 6.3 CHANGE DIRECTIVE

- 3.32.1 Delete paragraph 6.3.3.
- 3.32.2 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) performing 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.
- 3.32.3 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 affects the critical path of the Work."

- 3.32.4 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;
- .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."

SC3.33 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 3.33.1 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."

3.33.2 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."

- 3.33.3 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.
- 3.33.4 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."

SC3.34 GC 6.5 DELAYS

3.34.1 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 loss of profit or loss of opportunity costs and damages, both direct and indirect, arising from or caused by such delay, and regardless of whether any such costs, damages or claims are made or incurred by the Contractor or any Subcontractor."

3.34.2 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 loss of profit or loss of opportunity costs and damages, both direct and indirect, arising from or caused by such delay, and regardless of whether any such costs, damages or claims are made or incurred by the Contractor or any Subcontractor."

3.34.3 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."

- 3.34.4 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 employed or engaged by the Contractor directly or indirectly, or by any cause within the Contractor's control, then the Contract Time shall be extended for such reasonable time as the Consultant may decide in consultation with the Owner. In addition, the Owner shall be reimbursed by the Contractor for all reasonable costs and expenses incurred by the Owner as a result of such delay, including all charges for 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 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."

SC3.35 GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

- 3.35.1 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 to a material extent, 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."
- 3.35.2 Add a new paragraph 7.1.5A immediately after paragraph 7.1.5 as follows:
 - "7.1.5AThe 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."

SC3.36 GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 3.36.1 Amend paragraph 7.2.2, in line 1, by deleting "20" and replacing it with "45".
- 3.36.2 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 to the end of the paragraph:

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



- 3.36.3 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.
 - 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 loss of opportunity."

SC3.37 GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 3.37.1 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.
- 3.37.2 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.

8.2.13The 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."

SC3.38 GC 9.1 PROTECTION OF WORK AND PROPERTY

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

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

- 3.38.2 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."
- 3.38.3 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."

SC3.39 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

3.39.1 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,"

3.39.2 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"

- 3.39.3 Delete paragraph 9.2.7.4.
- 3.39.4 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,"

- 3.39.5 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.
 - 9.2.11 The Contractor shall indemnify the Owner and its board members, trustees, 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 board members, trustees, officers, directors, employees and agents in respect of any loss, costs, expenses or fine 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."

SC3.40 GC 9.4 CONSTRUCTION SAFETY

- 3.40.1 Amend paragraph 9.4.1 by deleting the first line of that paragraph and replacing it with the following: "The Contractor".
- 3.40.2 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 government agency.
 - 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, the Consultant or any other representative of the Owner 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, board members, trustees, 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."

SC3.41 GC 9.5 MOULD

3.41.1 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 loss of profit or loss of opportunity costs and damages, both direct and indirect, arising from or caused by such delay, and regardless of whether any such costs, damages or claims are made or incurred by the Contractor or any Subcontractor,"

SC3.42 GC 10.1 TAXES AND DUTIES

- 3.42.1 Amend paragraph 10.1.2 by adding the words ", without any mark-up" to the end of that paragraph.
- 3.42.2 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.
 - 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."

SC3.43 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

3.43.1 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.



3.43.2 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."

SC3.44 GC 10.4 WORKERS' COMPENSATION

3.44.1 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.

SC3.45 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.

3.45.1 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."

3.45.2 Add a new paragraph 11.1.1.4A immediately after paragraph 11.1.1.4 as follows:

"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."
- 3.45.3 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."

- 3.45.4 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."

SC3.46 GC 11.2 CONTRACT SECURITY

- 3.46.1 Amend paragraph 11.2.1 by deleting the words "specified in the Contract Documents" and replace them with "specified in the Act".
- 3.46.2 Amend paragraph 11.2.2 as follows:
 - (a) by deleting the words "If the Contract Documents require surety bonds to be provided, such" and replacing them with "Such"; and
 - (b) by deleting the words "the latest edition of the CCDC approved bond forms" and replacing them with "the *Act*".



SC3.47 GC 12.1 INDEMNIFICATION

- 3.47.1 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."

SC3.48 GC 12.2 WAIVER OF CLAIMS

- 3.48.1 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;
- (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."

SC3.49 GC 12.3 WARRANTY

3.49.1 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."

- 3.49.2 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."



3.49.3 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."

- 3.49.4 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."

SC3.50 PART 13 – OTHER PROVISIONS

3.50.1 Add new "**PART 13 – OTHER PROVISIONS**" as follows:

"PART 13 OTHER PROVISIONS

GC 13.1 CONTRACTOR LIABILITY FOR DAMAGES

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 Project. If any lien is claimed, filed or registered or any written notice of a lien is delivered by reason of services or 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 a lien, secure the discharge, release, vacating or withdrawal of such lien or written notice of a 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 a 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 legal costs on a full indemnity basis, disbursements, interest, borrowing, premium or other bonding costs and/or charges incurred by the Owner in releasing, vacating, discharging and/or otherwise dealing with a lien, written notice of a 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.

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 Except for the written direction referred to in paragraph 6.1.2 of GC 6.1 OWNER'S RIGHT TO MAKE CHANGES, 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

- 1 General
- 1.1 These general requirements shall apply to every section of the work contained in these specifications, and shall apply to all contracts within this tender.
- 1.2 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.
- 2 Drawings and Specifications
- 2.1 These Specifications are not intended as a detailed description of installation methods but serve to indicate particular requirements in the completed work.
- 2.2 The drawings and specifications complement each other and neither is to be considered alone. Hence, any item omitted in one, but mentioned or implied in the other, must be provided.
- 2.3 Where drawings do not show all the structural and architectural details and accurate dimensions required, these should be obtained by measurements at the building.
- 2.4 Where words in the Contract Documents occur in the singular number, they shall be taken as plural where applicable in accordance with the quantities required to satisfy the requirements of the Contract.
- 2.5 In the trade Sections of the Specifications, unless the word "only" suffixes the words "supply" or "install" or other variations of those words, it is the express intent of this Contract that "supply and install is implied". Words such as "provide" or "work includes" shall also mean "supply and install".
- 2.6 Wherever the words "approved", "satisfactory", "selected", "directed", "required", "submit", or similar words or phrases are used in the Contract Documents, it shall be understood that they mean, unless the text specifies other wise, "approved by Consultant", "satisfactory to Consultant", "selected by Consultant", "directed by Consultant", "required by Consultant", "submit to Consultant".
- 2.7 Where contract documents do not provide sufficient information for complete installation of item, then as supplement, comply with manufacturer's written instructions for quality workmanship.
- 2.8 All changes to the contract documents which result in an extra or a credit to the contract amount are not be executed until written instructions have been received and the extra or credit agreed to in writing by all parties to the contract.

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2.9	The Contractor shall execute variations, alterations and substitutions which do not affect the contract amount as instructed by the Board or its representative.		
2.10	at once notify the Board who shall send written instructions to all b	during the tender period, be advised by addenda of any additions, deletions to the specifications and drawings. All such changes	
3	Co-ordination and Co-operation		
3.1	Co-ordinate work of each Section as required for satisfactory and completion of Work. Take field dimensions required. Take into ac installations to assure best arrangements of components in availal Consult before commencing Work in critical locations. Fabricate a to suit field dimensions and field conditions.	count existing ble space.	
3.2	The Contractor shall co-ordinate the work of various trades to asse arrangement of pipes, conduits, ducts, equipment and other items available space. Under no circumstances will any claim for extra of due to the failure by the Contractor to co-ordinate work. If required locations prepare interference or installation drawings, showing the various trades and submit drawings to Consultant for approval before commencing work.	in the cost be allowed d, in critical e work of	
3.3	The Contractor and all sub-contractors shall co-operate with and of work with each other in proper sequence and as required for the s expeditious completion of the work. Take field dimensions relat work. Fabricate and erect work to suit field dimensions and f conditions. Provide all forms, templates, anchors, sleeves, inser accessories required to be fixed to or inserted in the work and set instruct the related trades as to their location. Pay the cost of extr by and make up time lost as the result of failure to provide the neo- operation, information or items to be fixed to or built in, in adequate	atisfactory and ive to this ield ts and in place or a work caused sessary co-	
3.4	Check all dimensions at the site before commencing fabrication ar and report all discrepancies, in writing, to Consultant. Where dime available before work is commenced, the dimensions required sha upon by the various trades concerned and approved by the Consu	ensions are not Ill be agreed	
4	Documents Required		
4.1	 Maintain at job site, one copy each of follow: .1 Contract Drawings. .2 Specifications. .3 Addenda. .4 Reviewed shop drawings. 		

	.5 Change Orders..6 Other modifications to Contract..7 Field test reports.
4.2	If requested provide copy on Site of Standards listed in Part 1 of various Specification Sections, under the heading Reference Standards.
4.3	Permits and Inspection
4.3.1	The Contractor shall obtain all permits, licences, notices and certificates of inspection and approval required to carry out work and provide proof of same to Plant Services.
5	Work Schedule and Progress Reports
5.1	Within (10) working days after Contract award, in form acceptable to the Board, provide a complete plan or layout of their work schedule, showing anticipated progress stages and final completion of work within time period required by contract documents, prior to commencing any work on board property. All work scheduled shall be approved by the Plant Services Department.
5.2	Interim weekly reviews of work progress based on schedule submitted by Contractor will be conducted as agreed by Consultant and schedule updated by Contractor in conjunction.
5.3	The Contractor shall keep a permanent written report of the daily progress of the Work on site. This report shall be open to Consultant's inspection at all reasonable times. Provide a copy to the Consultant upon request.
5.4	The report shall show the dates of commencement and completion of the different trades and parts of the work required under the Contract and shall include particulars regarding daily weather conditions and temperatures, excavation work, erection and removal of forms, concrete pour, finishing floors, starting and completion of masonry, roofing, etc., and daily number of employees of the various trades engaged on the various Sections of Work.
5.5	Submit a summary of the daily reports to the Consultant at weekly intervals, or when requested by the Consultant.
5.6	The Contractor shall take all possible steps to minimize interference with <u>school</u> <u>operations</u> and schedule their work, etc., in such a manner as to accomplish this end.
5.7	Schools are normally open for a Contractor to perform work during weekdays. These hours should be confirmed with the Facility Services Department and confirmed with the School 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.

- 5.8 The Contractor must report to the school office before proceeding elsewhere on board property.
- 5.9 The Contractor shall provide the Board with a complete plan or layout of their work schedule prior to commencing any work on Board property. All work scheduled shall be approved by the Facility Services Department.
- 6 Examination
- 6.1 The Contractor shall visit the premises and be satisfied as to conditions affecting the work before submitting a tender. Misinterpretation of any requirements of these specifications shall not relieve the Contractor of responsibility. No allowance will be made for any extra expense incurred by the Contractor through failure to do so. The Contractor shall make an appointment with the school prior to examining the site if required to do so after the Mandatory Site Visit.
- 6.2 The Board will not entertain any claim for extra work and/or expense incurred by the Contractor or his sub-contractors resulting from failure to examine surfaces and previous work and conditions upon which any work depends for its satisfactory execution. All unsatisfactory conditions, defects and deficiencies shall be reported, in writing, to the Consultant, and shall have been corrected before proceeding with the work.
- 6.3 Commencement of work shall imply acceptance of surfaces, previous work and conditions.
- 6.4 Drawings are, in part, diagrammatic and are intended to convey scope of Work and indicate general and approximate location, arrangement and sizes of fixtures, equipment, ducts, piping, conduit and outlets and similar items. Obtain more accurate information about locations, arrangement and sizes from study and co-ordination of Drawings, including shop drawings and manufacturer's literature and become familiar with conditions and spaces affecting these matters before proceeding with Work. Where minor discrepancies occur between architectural, mechanical, electrical and structural drawings Contractor to verify locations with Consultant prior to proceeding with the Work.
- 6.5 Where job conditions require reasonable changes in indicated locations and arrangements, make such changes with approval of the Consultant at no additional cost to the Board Similarly, where existing conditions interfere with new installation and require relocation, such relocation is included in work.
- 6.6 Install and arrange fixtures, equipment, ducts, piping and conduit to conserve as much headroom and space as possible, and avoid interference and obstruction of access. Observe good installation practice for safety, access, maintenance and follow manufacturer's recommendations. Make changes requested to comply with these requirements at no additional cost to the Board.

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6.7	If requested by the Consultant, and before their installation, relocate equipment, services, doors, openings, furring and other work at no additional cost to the Board; provided such relocation involves only reasonable minor adjustments and reasonable advance notice is given in writing.	
7	Materials, Plant and Equipment	
7.1	Materials, plant and equipment specified shall form basis of Bid and Con Where more than 1 brand or manufacturer is named in Specifications, or Drawings, choice is Bidders/Contractor's provided requirements of Drawing Specifications are met.	on
7.2	Unless explicit statement is made in Bid/Contract Documents to say no substitutions will be permitted; then words "or approved equal" are hereb deemed to apply to material, plant and equipment specified by brand or manufacturer, subject to following conditions:	у
7.2.1	Request for substitution is made after Contract award and proposed sub satisfies indicated or specified requirements and conditions to the approx Consultant, his Consultants and the Board. The Contractor shall be resp that the size and locations of proposed substitution shall not affect the fir work and that the equipment shall not be affected by substitution or reloc	val of the consible nished
7.2.2	The Contractor shall be responsible for all additional expenses incurred Board, himself and other Contractors due to his use of the proposed sub and adjacent work affected by the substitution.	•
7.3	Materials, plant and equipment shall not be damaged or defective and sh quality compatible with Specifications for purpose intended. If requested evidence as to type, source and quality. Remove and replace defective products, at own expense, regardless of previous inspections, and be responsible for delays and expenses caused thereby.	
7.4	All materials and equipment supplied for the work shall be new, of the be quality, and in accordance with the latest applicable specifications of the Canadian Standards Association.	
7.5	The particular method, material, procedure or equipment specified in this shall be used as a standard.	tender
7.6	A bidder may submit an alternative method, material, procedure or equip that specified in the tender specifications. All alternatives shall be equal superior to the standard specified in these tender documents.	
7.7	The bidder who furnishes an alternative method, material, procedure or equipment in place of the standard item specified shall furnish complete documented data including such information as chemical content and	

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	performance under laboratory tests which proves the quality and equalit proposed alternative. This information shall accompany the bid.	ty of the
7.8	In all cases where alternative methods, materials, procedures or equipm offered in response to this tender, the Board shall make the final ruling of acceptability.	
7.9	During and upon completion of the work, the Contractor shall remove from premises all surplus materials, equipment and debris.	om the
8	Contractor's Use of Site	
8.1	Do not unreasonably encumber site with materials or equipment.	
8.2	Move and protect stored products or equipment which interfere with ope Consultant or other contractors.	erations of
8.3	Temporary storage of materials and equipment may be provided for the Contractor as agreed to by the Board. However, the board will not assure responsibility or liability for these materials and equipment stored on board property.	ime any
8.4	Should the work be suspended for any cause, the Contractor must assure responsibility for the protection during the period of suspension.	ime all
8.5	Contractor is responsible for maintaining fire route and shall not encume route with materials, equipment or hoarding.	per this
9	Setting Out of Work	
9.1	Locate, confirm and protect control points prior to starting site work. Prepermanent reference points during construction.	eserve
9.2	Employ competent person to lay out work in accordance with control line grades.	es and
9.3	Prior to commencement of construction have building location, layout lin levels checked and verified for accuracy by an independent, registered Land Surveyor.	
9.4	The Contractor shall provide all subcontractors with, and be responsible levels and dimensions which sub-contractors may require to relate their the work of the Contractor or other subcontractors. Subcontractors mus notified that all such levels and dimensions are to be obtained from the Contractor.	work to
9.5	Maintain a complete, accurate log of control and survey work as it progr	esses.

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9.6	Existing Services	
9.6.1	Before commencing Work, establish location and extent of existing services in area of Work and notify Consultant of findings.	
9.6.2	Whenever it is necessary to cut, interfere with, or connect to existing services or facility do so at hours and times recommended by the Board, Governing Authorities and approved by Consultant and give ample notice to the School, the Board, Governing Authorities and Consultant; and with minimum disturbance to students, pedestrian and vehicular traffic and public and private property.	
9.6.3	If unknown services are encountered, immediately notify Consultant and confirm findings in writing and/or on Drawings. Obtain Consultant's written direction if such services require cutting, capping or relocation to do Work.	
9.6.4	Submit schedule and obtain approval from the Board for each proposed down of active service or facility. Adhere to approved schedule and pro notice to affected parties.	
10	Project Meetings	
10.1	Consultant will arrange project meetings and assume responsibility for s times and recording and distributing minutes.	etting
11	Quality Control	
11.1	Inspection	
11.1.1	The Board and Consultant shall have access to the Work and be entitled review the work at any time and the Contractor shall provide access to t with proper facilities for such inspection.	
11.1.2	Give timely notice requesting inspection if Work is designated for special inspections or approvals by Consultant instructions, or law of Place of the	
11.1.3	Where any work is covered up without the Consultant's approval or consoleration covers or permits to be covered Work that has been designal special tests, inspections or approvals before such is made, Contractor uncover the Work at his expense if so instructed by the Consultant; follo examination of the Work, the Contractor shall reinstate the examined are expense. If upon examination by the Consultant, the uncovered work is not in accordance with the contract, the Contractor shall pay all costs of correcting, re-examining and reinstating the Work.	ted for shall wing ea at his found
11.1.4	The Contractor shall promptly remove any defective work which has beer rejected by the Consultant for not conforming with the Contract. The Co shall, at his expense promptly reinstate the Work in accordance with the	ontractor

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	and shall pay the cost of making good any other Contractor's work destro damaged by the reinstatement.	yed or
11.1.5	The Board may deduct from the Contract sum the difference in value between the defective work and that called for by the Contract if, in the opinion of the Consultant, it is not expedient to correct the defective work. The Consultant determine the amount of such deduction.	the
12	Project Closeout	
12.1	Final Cleaning	
12.1.1	When the Work is Substantially Performed, remove surplus products, too construction machinery and equipment not required for performance of re Work.	
12.1.2	Remove waste materials and debris from site at regularly scheduled time not burn waste materials on site.	s. Do
12.1.3	The building shall be left in condition to meet the approval of the Consu The final cleaning shall not commence until authorized by the Consulta Contractor is responsible for notifying the Consultant when final cleaning take place.	nt. The
12.1.4	Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrom porcelain enamel, baked enamel, plastic laminate, mechanical and electr fixtures. Replace broken, scratched or disfigured glass.	
12.1.5	Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, and walls.	ł
12.1.6	Vacuum clean and dust building interiors, behind grilles, louvers and scre	ens.
12.1.7	Wax, seal, shampoo or prepare floor finishes, as recommended by manu	facturer.
12.1.8	Broom clean and wash exterior walks, steps and paved surfaces.	
12.1.9	Remove dirt and other disfigurations from exterior surfaces.	
12.1.10	Use experienced workmen or professional cleaners for final cleaning. Us cleaning materials recommended by manufacturer of surface to be cleaner Contractor to take full responsibility for proper cleaning measures and pro of surfaces.	ed.
12.2	Documents	
12.2.1	Collect reviewed submittals and assemble documents executed by Subcontractors, suppliers, and manufacturers.	

- 12.2.2 Submit material prior to final Application for Payment.
- 12.2.3 Submit operation and maintenance data, record (as-built) drawings.
- 12.2.4 Provide warranties and bonds fully executed and notarized.
- 12.2.5 Execute transition of Performance and Labour and Materials Payment Bond to warranty period requirements.
- 12.2.6 Submit a final statement of accounting giving total adjusted Contract Price, previous payments, and monies remaining due.
- 12.2.7 Consultant will issue a final change order reflecting approved adjustments to Contract Price not previously made.
- 12.3 Inspection/Takeover Procedures
- 12.3.1 Prior to application for certificate of Substantial Performance, carefully inspect the Work and ensure it is complete, that major and minor construction deficiencies are complete, defects are corrected and building is clean and in condition for occupancy. Notify Consultant in writing, of satisfactory completion of the Work and request an inspection.
- 12.3.2 During Consultant inspection, a list of deficiencies and defects will be tabulated. Correct same.
- 12.3.3 When Consultant considers deficiencies and defects have been corrected and it appears requirements of Contract have been performed, make application for certificate of Substantial Performance.
- 12.4 Restoration of Site
- 12.4.1 Where site has been disturbed beyond the limits of Work, due to construction vehicle traffic or other causes or where grade has been altered with new surfaces. The contractor is responsible for restoration of site to ensure that disturbed areas are compacted with appropriate fill material and sodded, and grades blended such that there are no variations in grade and do not pose a safety hazard to pedestrians and to the approval of the Board and at no additional expense to the Board.
- 12.4.2 Where areas outside of the limits of Work have been damaged or disturbed due to demolition or installation methods, storage and movement of materials, failure to adequately protect existing surfaces or classrooms, use of powder actuated fastening devices or other causes; the Contractor shall restore, patch and paint surfaces where damage has occurred to the satisfaction of the Board and at no additional expense to the Board.

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13	Health and Safety Requirements	
13.1	The Contractor shall observe all health and safety requirements includ following procedures, methods and responsibilities:	ing the
13.2	The Contractor will take all necessary steps to protect personnel (work visitors, general public etc.) and property from any harm during the concontract.	
13.3	All work procedures will be in accordance with board and legislated sta	andards.
13.4	All equipment shall be in safe operating condition and appropriate to the	ie task.
13.5	The Contractor shall ensure that only competent personnel are permitt on site. The Board will throughout the term of the contract also remove site any persons not observing or complying with safety requirements.	
13.6	The Contractor shall comply with all federal, provincial and municipal s codes and regulations and the Occupational Health and Safety Act.	afety
13.7	The Contractor shall provide competent personnel to implement their s program and ensure that the Board's standards and those of the Ontar and Safety Act are being complied with.	
13.8	Facility Services or the consultant will monitor every week to ensure th requirements are met and that safety records are properly kept and ma Continued disregard for safety standards can cause the contract to be and the Contractor or sub-contractors removed from the site.	aintained.
13.9	The Contractor will report to the Board, Consultant and Jurisdictional A any accident or incident involving Contractor, Board or public personne property arising from the contractor's execution of the work.	
13.10	The Contractor shall ensure that every "controlled product" used at the shall meet the labelling requirements and have an updated correspond material safety data sheet as per the <u>Workplace Hazardous Materials</u> <u>System</u> legislation. The Contractor shall ensure that all the material safets are available at the work site.	ling Information
13.11	The Contractor shall be responsible for all or any damages to the build contents, caused by their forces for whatever cause and shall indemnif save Simcoe Country District School Board harmless from injury to all employees when working within and around buildings, while under con Simcoe Country District School Board.	y and pupils and
14	Toxic and Hazardous Substances and Materials	

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14.1	If the contractor locates asbestos containing materials or other known toxic and hazardous substances and materials during the project then the contractor shall case work and seal off the area and immediately contact the Consultant.	
14.2	The Board shall arrange to remove the asbestos or other toxic and hazar substance or material.	rdous
14.3	The Contractor shall comply with all regulations relating to asbestos. Th removal and disposal of asbestos shall be in accordance with the Ministr Environment Regulation 347.	
14.4	The Contractor shall indemnify and hold harmless the Board, Consultant consultants, Sub-contractors, Suppliers and their agents and employees and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or resulting from exposure to, or the presence or hazardous substances or materials which were brought onto or made Place of Work by the Contractor or any party for which the Contractor is responsible by law.	, from of, toxic
15	Changes to the Work	
15.1	The Contractor, when notified by the Consultant of proposed changes in Work which result in an extra or a credit to the contract amount, shall wit days, submit for the Consultant's approval, a fully itemized estimate of th of the proposed changes, such estimate to be in a form approved by the Consultant, who in turn shall submit the proposed changes for the Board approval.	hin 14 e costs
15.2	All changes to the Contract Documents which result in an extra or a cred contract amount are not to be executed until written instructions have be received and the extra or credit agreed to in writing by all parties to the c	en
15.3	The Contractor shall execute variations, alterations and substitutions whin not affect the contract amount as instructed by the Board or its represent	
16	Damages	
16.1	The Contractor shall be responsible for all or any damages to the building contents, caused by their forces for whatever cause and shall indemnify save the Simcoe Country District School Board harmless from injury to a and employees when working within and around buildings, while under co with the Simcoe Country District School Board.	and Il pupils
17	Inspection and Invoicing	
17.1	The Contractor may submit invoices to the Project Coordinator of the Sin Country District School Board, 1170 Hwy. 26, Midhurst, Ontario L9X 1N6 Attention: Accounting Department for progress payments as the work pr	<mark>6,</mark>

and significant portions of the contract are completed and ready for inspection. Submit invoices in accordance with the Supplementary Conditions of the CCDC 2-2008 contract.

- 18 Correction after Completion
- 18.1 Without restricting any warranty or guarantee implied or imposed by law or contained in the Contract Documents, the Contractor shall, at his own expense, rectify and make good any defects due to faulty materials or workmanship that appear in the Work or that comes to the attention of the Board within twelve (12) months from the date of the Certificate of Substantial Performance.
- 18.2 The Board may direct the Contractor to rectify and make good any defect or fault referred to herein or covered by any other expressed or implied warranty or guarantee.
- 18.3 Such a direction to the Contractor shall be in writing and may include a stipulation in respect of the time within which a defect or fault is required to be rectified and made good by the Contractor.
- 18.4 Within the time stipulated therein, the Contractor shall at his own expense rectify and make good any defect or fault described in such a direction and correct or pay for all damage resulting from the corrections made under this Section.
- 18.5 Neither the Certificate of Total Performance nor payment thereunder shall relieve the Contractor of responsibility under this Section.

- 1 CASH ALLOWANCES
- 1.1 Expend each allowance as directed.
- 1.2 Refer to CCDC 2, GC 4.1
- 1.3 Cash allowances, unless otherwise specified, cover net cost to Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage installation and other authorized expenses incurred in performing Work.
- 1.4 Contract Price, and not cash allowance, includes Contractor's overhead and profit in connection with such cash allowance.
- 1.5 Contract Price will be adjusted by written order to provide for excess or deficit to each cash allowance.
- 1.6 Where costs under a cash allowance exceed amount of allowance, Contractor will be compensated for excess incurred and substantiated plus allowance for overhead and profit as set out in Contract Documents.
- 1.7 Include progress payments on accounts of work authorized under cash allowances in Consultant's monthly certificate for payment.
- 1.8 Include the following cash allowances in Bid Price.
 - .1 Inspection & Testing \$3,000.00

***********END*********

- 1 Administrative
- 1.1 Submit to Consultant submittals listed for review. Submit with reasonable promptness and in an orderly sequence so as to not cause delay in the Work.
- 1.2 Work affected by submittal shall not proceed until review is complete.
- 1.3 Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of the Work and Contract Documents.
- 1.4 Verify field measurements and affected adjacent Work are co-ordinated.
- 1.5 The Contractor shall be responsible for:
- 1.5.1 Notifying the Consultant in writing of changes made to shop drawings from Drawings and Specifications;
- 1.5.2 Changes made from Drawings and Specifications not covered by written notification to the Consultant;
- 1.5.3 Making any changes in the shop drawings which the Consultant may require consistent with the Contract Documents;
- 1.5.4 Submitting copies of revised shop drawings to the Consultant;
- 1.5.5 Errors and omissions in the shop drawings;
- 1.5.6 Meeting requirements of the Contract Documents;
- 1.5.7 Confirmation of dimension and correlation at the job site;
- 1.5.8 Co-ordination of dimension and correlation at the job site;
- 1.5.9 Any conflicts between Subcontractors as a result of lack of comparison and coordination of shop drawings of the work affected trades;
- 1.5.10 Signifying, checking and approving of all submissions, by stamping with company stamp and signature by responsible company official.
- 1.6 The Consultant shall review the shop drawings for the sole purpose of ascertaining conformity with the general design concept and for general arrangement.
- 1.7 This review shall not mean that the Consultant approves the detail design inherent in the shop drawings and shall not relieve the Contractor of his responsibilities.

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1.8	Review of the shop drawings by the Consultant does not authorize changes in cost or time.
2	Shop Drawings and Product Data
2.1	"Shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of the Work.
2.2	Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connection, explanatory notes and other information necessary for completion of Work.
2.3	Adjustments made on shop drawings by Consultant are not intended to change Contract Price.
2.4	Make changes in shop drawings as consultant may require.
2.5	Submit electronic copies of shop drawings for each requirement requested in specification Sections and as Consultant may reasonably request.
2.6	Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as Consultant may reasonably request where shop drawings will not be prepared due to standardized manufacture of product.
3.0	CLOSE OUT SUBMITTALS,
3.1	Substantial Performance of the Work
3.1.1	Conform to the General Conditions of the Contract and publish a copy of the Certificate of Substantial Performance once in a construction trade newspaper.
3.1.2	At commencement of Work, obtain from Consultant one electronic copy of Contract Drawings and Specifications for "as-built" purposes.
3.1.3	Ten (10) days prior to date of Substantial Performance submit to the Consultant one (1) hard copy of "as-built" drawings for record purposes.
3.1.4	As Work progresses, clearly mark in a neat and legible form, on Specifications and one set of white prints, all significant changes, and deviations from Contract Drawings and Specifications, additional Instructions and Change Orders caused by Site conditions.
3.1.5	Changes and deviations marked on as-built record drawings and specifications by reference to and other documents are not acceptable.
3.1.6	Have items relating to mechanical and electrical work recorded by respective trade.

3.1.7 Print lettering and numbers in size to match original. Lines may be drawn free hand provided they are neat and accurate. Add **"AS-BUILT RECORD"** at each drawing title block and on title page of Specifications.

3.1.8 Show actual locations of following on record drawings:

- Access doors and panels.
- Dimension services in relation to structure and building grid lines.
- Ductwork, piping, conduit, mechanical and electrical equipment and associated work.
- Concealed piping, conduit, equipment and conveying systems, including such items provided for future use.

Record following information on record specifications:

- Products, materials and other items selected from those specified.
- Approved substitutions and accepted alternatives.
- Other approved changes and deviations to items specified.
- 3.1.9 Have record drawing white prints and specifications available for inspection at all times.
- 3.1.10 Prior to date of Substantial Performance, allowing sufficient time for review, clearly, neatly and accurately transfer information from marked-up white prints to reproducible transparencies. Print lettering and numbers in size to match original. Lines may be drawn free hand, provided they are neat and accurate. Add **"AS-BUILT RECORD"** at each drawing title block. Should extensive changes and deviations to a drawing make information illegible, re-draft changed areas as required.
- 3.1.11 Submit one (1) copy containing as-built record information for review, as for shop drawings.
- 3.1.12 Prior to inspection for Total Completion, submit one (1) set, hard copy of as-builts, one (1) hard copy of the O&M Manual and one (1) USB flashdrive with scans of asbuilts and O&M material to the Consultant. The Consultant will submit final PDF and DWG or RFT file of record drawings to the Board.
- 4.1 Maintenance Instructions and Data Book
- 4.1.1 Provide Consultant with three sets of operating and maintenance instructions, and data books, ten (10) days prior to advising Consultant that Work is substantially performed which include:
 - Complete listing of Subcontractors' names, addresses and telephone numbers with notation as to which portions of Contract they have provided.

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		Page 4

- Complete listing of materials, products and equipment including serial numbers, manufacturer's names, and sources of supply.
- Description of each system, with description of each major component of systems.
- Operation and installation instructions for each assembly, component and system.
- Complete cleaning and maintenance instructions for each finish, assembly, component and system, including warnings of harmful practices.
- Lists of spare parts for each assembly, component and system complete with names, addresses and telephone numbers of suppliers.
- Installation manual or installation instructions for each mechanical, electrical or architectural item, stamped and signed by Subcontractors submitting them.
- Record drawings of mechanical, electrical, and special installations.
- Final reviewed shop drawings.
- Copies of all warranties, properly executed.
- Provide books consisting of three-ring hard cover loose-leaf binders, indexed as to contents and identified on binding edges as "Maintenance Instructions and Data Book, for (Project name)". Ensure that binders contain name of Contractor and date of Substantial Performance of Work.
- Organize and label contents into applicable categories of work, parallel to Specification Sections and provide a Table of Contents.
- Use consistent terminology in books.
- Submit maintenance and operation instructions, which are manufacturer's latest published editions at date of submission.
- Should any finish, product or assembly be injured or damaged by faulty maintenance materials, practices not warned against in maintenance manual or by failure to provide proper maintenance manuals in time, rectify such damage or injury at no additional cost to Owner.

5.1 Product Warranties

5.1.1 Contractor and Sub-Contractors where applicable shall submit extended warranties without limitations for trades noted in specification sections, provide Warranty complete with Manufacturer's guarantee where applicable.

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5.1.2	Performance of replacement work, rectifications and corrections and deficiencies shall be executed at times convenient to Own require work outside of normal working hours at Contractor's expo	er and this may

*****END*****

1.0 PURPOSE

The purpose of this section is to define the procedure to be followed in the administration of the Health and Safety procedure and to outline the functions of this procedure.

2.0 SCOPE

This procedure applies to all contractors and sub-sub-contractors. Each person is responsible for implementing the safety goals of this procedure.

WHMIS procedures, as required by Provincial Law, shall be adhered to and although each province has implemented standard Occupational Health and Safety Acts, the requirements of these Acts are only a minimum. An employee's common sense must be further utilized in applying on/off-the-job safety.

3.0 RESPONSIBILITIES

- 3.1 The project "Constructor"shall file Notice of Project with Provincial authorities prior to commencement of work.
- 3.2 The Contractor is responsible for ensuring that:
 - it's employees, sub-contractors and sub-contractor's employees follow these guidelines;
 - training is provided to all it's employees, sub-contractors and sub-contractors employees;
 - work is carried out in the manner and with protective devices, measures and procedures required;
 - new employees or sub-contractors are provided with timely notice of the measures and procedures to follow for their protection while on the job site;
 - protection for the public is maximized and inconvenience from the work is minimized;
 - current WHMIS inventory is on site and kept current by the person in charge of the site;
 - any employee injured receives the necessary medical attention required to ensure a speedy, safe return to gainful employment;
 - when an accident occurs, appropriate reports are prepared and submitted to the appropriate Provincial authority;
 - the accident is thoroughly investigated;
 - Submit all Ministry of Labour safety inspections or direction to comply to the Consultant and to the Board, as soon as possible after any occurrence;
 - a copy of the Ministry of Labour report is submitted to the Consultant as well as notification of attention for any follow-up as required.

The Contractor's worker's responsibilities include:

- knowing and following the Health and Safety procedures;
- using or wearing the equipment, protective devices or clothing that is required to be used or worn;
- checking all equipment and tools prior to using them;
- reporting any defects in equipment, devices, breaches of the Act and hazards to their supervisor;
- avoiding "horseplay" that could result in an accident;
- abiding by all Federal and Provincial Operational Health and Safety Acts and Regulations;
- abiding by all site rules and regulations imposed by an owner, general contractor or industrial establishment.

4.0 ACCIDENT / INCIDENT INVESTIGATION

Accident investigations are conducted solely to determine what caused the accident and what steps can be taken to avoid an occurrence. The Contractor is responsible for ensuring that all accidents and incidents occurring during the performance of the work or at the work site are investigated. However, the level of the investigation is dependent on the severity of the accident. First aid cases do not require investigating but should be analyzed in sufficient depth to ensure that no learning experience is missed.

Investigations should be conducted promptly and without bias. It is essential that all facts concerning the accident are covered, therefore the following procedure is recommended:

- a) physically check the conditions at the site of the accident including any equipment, materials, tools or environmental condition that could have contributed to the cause;
- b) establish factually what happened by interviewing the injured person, witnesses and supervisor responsible and, where possible have the witnesses and the injured person(s) return to the positions they were in when the accident occurred;
- c) determine the conditions or actions that led to and caused the accident;
- d) prepare a list of recommendations for preventing a similar accident.

In the case of a fatality or critically injured person, the Contractor and employer must conform to all requirements as described in the Provincial Occupational Health and Safety Acts.

The Contractor superintendent, or appointed delegate, must inform their home office of any work-related injury or illness requiring treatment beyond the first-aid level on the same day as the accident occurred.

5.0 ACCIDENT REPORTING

The Contractor shall provide reports to the Provincial Workplace Safety and Insurance Board (WSIB), the Ministry of Labour, the Health and Safety Representative and the Trade Union, as the Act requires.

- 5.1 The Contractor's Responsibilities
 - a) Reporting to the WSIB:
 - 1. Telephone the Consultant and Board to give a detailed verbal report stating job number, employee's name, name of the doctor or hospital referred to, and the description of the accident. This activity is in addition to the report given to the Contractor's Head Office.
 - 2. Fill in the WSIB Treatment Memorandum form at the job site and give it to the injured employee for presentation to the doctor or hospital.

The Contractor shall act promptly as the WSIB must have the reports within 24 hours of the accident occurring. *A substantial fine is levied by the WSIB for each late claim filed*.

- b) Reporting occupational illness:
 - 1. Should an employee discover a case of such illness, the Superintendent shall be advised immediately.
- c) Reporting accidents, including explosions, floods, failure of any equipment, device, supports, etc.
- d) Reporting unsafe conditions:
 - 1. If the risk is serious, put up a temporary barrier, attach a "danger" tag, or take other appropriate steps to prevent possible personal injury or other accident, before you report unsafe conditions.

5.2 The Worker's Responsibilities

The worker shall report an accident immediately to the supervisor and be available to the supervisor to record details of the accident. The worker shall follow instructions provided by the Supervisor. The following situations shall be reported:

a) Death or critical injury:

- 1. The injured person should not be moved except to save the injured person's life; wait for a St. John's, or other, trained person;
- 2. Equipment and/or materials should not be moved or disturbed except to prevent further damage or injury;
- 3. Wait for instructions.
- b) Other personal injury:
 - 1. Depending on the circumstances, if there are any doubts about moving an injured person, send someone for a St. John's Ambulance certificate holder;
 - 2. If the injured person can move readily, accompany the injured person to the site safety office.

All personal injuries (Workplace Safety Insurance) are to be reported, including any occasion on which the worker (a) loses time, (b) receives medical aid, (c) goes to the doctor's office and/or (d) goes to a hospital emergency ward.

Falls, with or without safety belts, unconsciousness and complaints of sprains or back strain must also be reported. These injuries are to be reported to the worker's immediate supervisor.

6.0 SITE SAFETY INSPECTIONS

It is recognized that good site conditions reduce the risk of injury to all persons present at the worksite and contribute greatly to the overall profitability of the project. When required by the Jurisdictional Authority, the Contractor shall provide a safety plan to the Consultant and Board for review prior to commencement of work. Each person should be on the lookout for unsafe acts and conditions in the workplace and take immediate action to correct any potentially unsafe or hazardous situation.

*****END*****

- 1 General
- 1.1 Schedule and co-ordinate work to minimize cutting and patching.
- 1.2 Cut, patch and make good to accommodate Work and to leave Work in finished condition. Cutting in this sense shall mean actual cutting of components to allow new components to pass through or to provide new openings. Cutting shall not mean mere drilling of holes to accommodate screws, anchors, bolts or other fasteners as such. Such drilling is part of Section's installation function.
- 1.3 Use tradesmen qualified in work being cut and patched to ensure that it is correctly done.
- 1.4 Do not cut, drill or sleeve load-bearing members without obtaining written approval for each condition.
- 1.5 Cut holes carefully, leaving clean holes no larger than required, after they are located by Sections requiring them.
- 1.6 Make cuts with clean, true, smooth edges to tolerances required and in conformance with industry practice for applicable class of work. Make patches undetectable in finished work.
- 2 Responsibility for Cutting and Patching
- 2.1 Responsibility for various categories of cutting and patching shall be as follows:
- 2.1.1 Cutting and patching of architectural and structural work required for installation of work of Divisions 15 and 16:
 - .1 Holes and openings up to 200 mm (8") in diameter and related patching by applicable Sections of Divisions 15 and 16;
 - .2 Holes and openings larger than 200 mm (8") in diameter, chases, removal of existing bulkheads and furring (if any) and related patching by Contractor.
- 2.2 Cutting and patching of architectural and structural work required by Sections other than those of Divisions 15 and 16 is responsibility of Section whose work is to be cut or patched.

*****END****

1 Maintenance

- 1.1 Use all means necessary to maintain construction facilities and controls in proper and safe condition throughout progress of the Work.
- 1.2 In the event of loss or damage, immediately make all repairs and replacements necessary to Consultant's approval and at no additional cost to the Board.
- 2 Access Roads, Parking and Traffic Control
- 2.1 Provide access roads as may be necessary to provide safe and adequate access for materials, products and other supplies. Provide and maintain access sidewalks, roadways, and similar facilities as may be required for access to the Work. Do not block public roads, or impede traffic during work of this Project and if required to temporary block traffic then provide flag person to direct traffic acceptable to Municipal authorities. Remove accumulations of ice and snow from areas providing access to Site. Ensure that access is available for emergency vehicles. Comply with fire plan for vehicular traffic.
- 2.2 Provide roads, walks, ramps stairs and other such means of access as necessary. Maintain temporary entrances to building(s) including enclosed hoarding as required. Maintain access to existing service entrance(s) at all times, including ready access for fuel oil trucks and delivery vehicles. Bridge excavations with construction to safely support any load that could be imposed or provide personnel to assist in deliveries to building(s) as required.
- 2.3 A limited number of parking spaces are available on site. This space shall be used as directed by the Board and School Principal particularly while school is in session. The Board will not be responsible for parking fines incurred by Contractor, Sub-Contractors or their employees.
- 2.4 Do not be nuisance to public traffic any time. Manage construction traffic by using designated roads and by providing trained flag persons to direct public traffic as appropriate
- 3 Dust Tight Screens
- 3.1 Provide dust tight screens or partitions to localize dust generating activities, and for the continuing operation of school when in operation, protection of workers, finished areas of work and the public. Separate areas of work from occupied portions of building with dust-tight screens. Screens shall consist of plywood min 6mm (1/4") thick on wood stud supports, or equivalent. Seal edges and joints to achieve positive protection. Provide lockable door(s) in screen(s) as may be required to provide security to area of work on Drawings and extra key to Board or School Principal Remove screens promptly when no longer required and make good adjacent surfaces

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3.2	Maintain and relocate protection until such work is complete.	
4	Site Storage/Loading	
4.1	Provide and maintain storage sheds and workshops if required by the w throughout the construction period. Remove temporary buildings upon completion of the Work.	ork
4.2	Confine the Work and the operations of employees to limits indicated by Contract Documents. Do not unreasonably encumber the premises with products.	
4.3	Do not load or permit to be loaded any part of the Work with a weight or that will endanger the Work.	force
5	Sanitary Facilities	
5.1	Existing facilities may be used provided they are maintained in clean co	ndition.
5.2	Have washroom facilities used by GC and their subcontractors prof cleaned upon completion of work.	essionally
6	Water Supply	
6.1	The Board shall provide a continuous supply of potable water for constr use.	uction
7	Temporary Heating	
7.1	Maintain temperatures of minimum 10 degrees C in areas where constr in progress, unless indicated otherwise in specifications. Maintain temp in occupied areas of the building to ensure comfort of the building occup	eratures
7.2	Ensure that in all areas of work where finishes are being installed that the minimum temperatures are established as required for the proper install Work. Be responsible for damage to the Work due to failure in providing adequate heat and protection during construction.	ation of
8	Temporary Power and Light	
8.1	The Board will pay for temporary power required during construction for temporary lighting and the operating of power tools.	
9	Protection for Off-Site & Public Property	
9.1	Protect surrounding private and public property from damage during per of Work.	formance

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9.2	Be responsible for damage incurred.	
9.3	Be responsible for damage incurred by Work Force where property had damaged from vehicular traffic or parking on private or School Board p	
10	Fire Protection	
10.1	Provide and maintain temporary fire protection equipment during perfo Work required by insurance companies having jurisdiction and governi regulations and bylaws.	
10.2	Open fires and burning of rubbish are not permitted on the site.	
11	Protection of Building Finishes & Equipment	
11.1	Provide adequate protection of the existing building to prevent migratic and other contaminants.	on of dust
11.2	Provide protection for finished and partially finished building finishes and equipment during performance of Work from damage and staining and adjacent materials and/or work to prevent damage whether they have have not yet been installed. The responsible party shall make good ar all damage to the satisfaction of the Simcoe Country District School Bo Contractors shall be responsible for all work and materials pertaining to work.	l protect been or ny and/or pard.
11.3	Provide necessary screens, covers, hoardings as required to protect n existing work.	ew and
11.4	Be responsible for damage incurred and cleaning due to lack of or imp protection.	roper
11.5	Should the work be suspended for any cause, the Contractor must ass responsibility for the protection during the period of suspension.	sume all
12	Project Cleanliness	
12.1	Maintain the Work in tidy condition, free from the accumulation of wast and debris, other than that caused by the Board or other Contractors.	
12.2	Remove waste material and debris from the site at the end of each wo	rking day.
12.3	Clean interior areas prior to start of finish work, maintain areas free of other contaminants during finishing operations.	dust and
12.4	Clean adjacent classrooms and corridors to the satisfaction of the Con where dust and other contaminants have infiltrated due to improper pro	

12190T	CONSTRUCTION FACILITIES	01 51 00 Page 4
13	First Aid	
13.1	Provide, at the work site, such equipment and medical facilities as required Workmen's Compensation Act, to supply first-aid service to anyone whe injured on the work site. In case of serious injury or death, report the a immediately, to the proper authorities and to the Board and Consultant	o may be accident
14	Removal of Construction Facilities	
14.1	Remove all temporary facilities from site when directed by Consultant.	

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1	Requirements Included
	 Reference standards. Product quality, availability, storage, handling, protection, transportation. Manufacturer's instructions. Workmanship, co-ordination, cutting, fastenings. Existing facilities.
2	Reference Standards
2.1	 Within the text of the specifications, reference may be made to the following standards: ACI - American Concrete Institute AISC - American Institute of Steel Construction ANSI - American National Standards Institute ASTM - American Society of Testing and Materials CEC - Canadian Electrical Code (published by CSA) CEMA - Canadian Electrical Manufacturer's Association CGSB - Canadian Institute of Steel Construction CLA - Canadian Institute of Steel Construction CPCA - Canadian Pre-stressed Concrete Institute CRCA - Canadian Roofing Construction Association CSA - Canadian Standards Association FM - Factory Mutual Engineering Corporation IEEE - Institute of Electrical and Electronic Engineers IPCEA - Insulated Power Cable Engineers Association NAAMM - National Association of Architectural Metal Manufacturers NBC - National Building Code NEMA - National Electrical Manufacturers' Association TTMAC - Terrazzo, Tile and Marble Association of Canada ULC - Underwriters' Laboratories of Canada
	Conform to these standards, in whole or in part as specifically requested in the specifications.
2.2	Conform to latest date of issue of reference standards and amendments effect on date of submission of bids except where a specific date or issue is specifically noted.
2.3	Where Drawings and/or specifications exceed code or standard requirements, provide such additional requirements.

2.4 Where codes or standards or this specification does not provide all information necessary for complete installation of an item, then strictly comply with the manufacturer's instructions for first quality workmanship. In cases of discrepancies consult the Architect for clarification.

- 2.5 In the event of conflict between any provisions of relevant codes and standards, the requirement of authority having jurisdiction shall apply.
- 3 Products and Materials
- 3.1 Quality
- 3.1.1 Products, materials, equipment and articles (referred to as Products throughout the specifications) incorporated in the Work shall be new, not damaged or defective, and of the best quality (compatible with specifications) for the purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- 3.1.2 Defective Products, whenever identified prior to the completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a precaution against oversight or error. Remove and replace defective Products at own expense and be responsible for delays and expenses caused by rejection.
- 3.1.3 Should any dispute arise as to the quality or fitness of Products, the decision rests strictly with the Consultant based upon the requirements of the Contract Documents.
- 3.1.4 Unless otherwise indicated in the specifications, maintain uniformity of manufacture for any particular or like item throughout the building.
- 3.1.5 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.
- 3.2 Availability
- 3.2.1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of Products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- 3.2.2 In the event of failure to notify the Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, the Consultant reserves the right to substitute more readily available products of similar character, at no increase in Contract Price.
- 3.2.3 Storage, Handling and Protection
 - .1 Handle and store products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.

4

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5.1.1

.2	Store packaged or bundled Products in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in the Work.
.3	Store products subject to damage from weather in weatherproof enclosures.
.4	Store cementitious products clear of earth or concrete floors, and away from walls.
.5	Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
.6	Store sheet materials, i.e. lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
.7	Store and mix paints in a heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
.8	Remove and replace damaged Products at own expense and to the satisfaction of the Consultant.
Manuf	acturer's Instructions
accord	s otherwise indicated in the specifications, install or erect Products in lance with manufacturer's instructions. Do not rely on labels or enclosures ed with Products. Obtain written instructions directly from manufacturers.
	the Consultant, in writing, of conflicts between the specifications and acturer's instructions, so that the Consultant may establish the course of
these i	per installation or erection of Products, due to failure in complying with requirements, authorizes the Consultant to require removal and allation at no increase in Contract Price.
Workm	nanship
Genera	al
skilled the Co	nanship shall be the best quality, executed by workers experienced and in the respective duties for which they are employed. Immediately notify insultant if required Work is such as to make it impractical to produce ed results.

12190T	MATERIAL AND EQUIPMENT	01 60 00 Page 4	
5.1.2	Where required by code or other by-laws and regulations, trades per licensed in their trade. The Consultant reserves the right to require the	Do not employ any unfit person or anyone unskilled in their required duties. Where required by code or other by-laws and regulations, trades people shall be icensed in their trade. The Consultant reserves the right to require the dismissal rom the site, workers deemed incompetent, careless, insubordinate or otherwise objectionable.	
5.1.3	Any work not acceptable to the Owner, the 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.		
5.1.4	Where not otherwise specified or shown, all work must conform to the local governing codes and by-laws and to the <u>Ontario and National</u> Building Codes. <u>All codes, standards, regulations and by-laws shall be of the latest date or amendment prior to tender issue.</u>		
5.2	Co-ordination		
5.2.1	Ensure co-operation of workers in laying out Work. Maintain efficien continuous supervision.	it and	
5.2.2	Be responsible for co-ordination and placement of openings, sleeves accessories.	s and	
5.3	Concealment		
5.3.1	In finished areas, conceal pipes, ducts and wiring in floors, walls and except where indicated otherwise.	d ceilings,	
5.3.2	Before installation, if any doubt arises as to means of concealment, or intention of the Contract Documents in this regard, inform the Consuproceeding with the portion of work in question.		
5.3.3	Make arrangements to have mechanical and electrical work and all s components laid out well in advance of concrete placement and furri installation so that provision may be made for proper concealment. shall be tested, inspected, pipe and duct covering applied where app approved before being concealed.	ing All such work	
5.3.4	The Contractor takes full responsibility for informing the Consultant i concealment, and shall notify the Consultant and arrange with the C time when a site review can take place prior to concealment. Failure and any consequent opening up of finishes and structure is the sole of the Contractor.	onsultant a e to do so	
5.4	Cutting and Remedial Work		
5.4.1	Perform cutting and remedial work required to make the parts of the together. Co-ordinate the Work to ensure this requirement is mainta		

5.4.2	Should work performed outside this contract necessitate cutting and/or remedial work to be performed, the cost of such work will be valued by the Consultant.
5.4.3	Perform cutting and remedial work by specialists familiar with the materials affected. Perform in a manner to neither damage nor endanger any portion of Work.
5.5	Location of Equipment & Fixtures
5.5.1	Obtain manufacturer's literature for roughing-in and hook-up of equipment, fixtures and appliances.
5.5.2	Submit field drawings to indicate relative position of various services and equipment when required by Consultant.
5.6	Fastenings
5.6.1	Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
5.6.2	Prevent electrolytic action between dissimilar metals and materials.
5.6.3	Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in the affected specification Section.
5.6.4	Space anchors within their load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
5.6.5	Keep exposed fastenings to a minimum, space evenly and install neatly.
5.6.6	Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.
5.7	Protection of Work in Progress
5.7.1	Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the Consultant, at no increase in Contract Price.
5.7.2	Adequately protect troweled concrete floors and finished flooring from damage. Take special measures when moving heavy loads or equipment on them.
5.7.3	Prevent overloading of any part of the building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Consultant.

- 6 Protection of Existing Utilities and Services
- 6.1 Where work involves breaking into or connecting to existing utilities and services, carry out work at times directed by Consultant and governing authorities, with minimum of disturbance to occupants.
- 6.2 Before commencing work, and during work, establish location and extent of existing utilities and service lines in area of Work and notify Consultant of findings. In particular take care and hand dig around existing utilities and service lines to establish levels affected by new work and relocation.
- 6.3 Contact appropriate Authorities having Jurisdiction to arrange meeting on site to review particular requirements when and notify Board and Consultant of any special requirements.
- 6.4 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- 6.5 Record locations of maintained, re-routed and abandoned utilities and service lines.

Part 1 General

1.1 Section Includes

.1 Administrative procedures preceding preliminary and final inspections of Work.

1.2 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2008, Stipulated Price Contract.
- .2 Supplementary Conditions

1.3 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections from that inspection have been made.
 - .2 Request Consultant Inspection.
- .2 Consultant's Inspection: Consultant and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Certificates required by Boiler Inspection Branch, Fire Commissioner, Utility companies have been submitted.
 - .5 Operation of systems have been demonstrated to Owner's personnel.
 - .6 Work is complete and ready for final inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Board, Consultant and Contractor. If Work is deemed incomplete by Board and Consultant, complete outstanding items and request reinspection.
- .5 Declaration of Substantial Performance: when Board and Consultant consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance. Refer to CCDC 2, General Conditions Article and Supplementary Conditions for specifics to application.
- .6 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance shall be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
- .7 Final Payment: when Board and Consultant consider final deficiencies and defects have been corrected and it appears requirements of Contract have been totally performed,

make application for final payment. Refer to CCDC 2 and Supplementary Conditions. If Work is deemed incomplete by Board and Consultant, complete outstanding items and request re-inspection.

- .8 Payment of Holdback: after issuance of certificate of Substantial Performance of Work, submit an application for payment of holdback amount in accordance with CCDC 2 and Supplementary Conditions.
- Part 2 Products
- 2.1 NOT USED
 - .1 Not Used.
- Part 3 Execution
- 3.1 NOT USED
 - .1 Not Used.

*************END*********

Part 1 General

1.1 RELATED SECTIONS

.1 Close Out Procedures Section 01 70 00

1.2 SUBMITTALS

- .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
- .2 Copy will be returned after final inspection with Consultant's comments.
- .3 Revise content of documents as required prior to final submittal.
- .4 Two weeks prior to Substantial Performance of the Work, submit to the Consultant four final copies of operating and maintenance manuals.
- .5 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .6 Furnish evidence, if requested, for type, source and quality of products provided.
- .7 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .8 Pay costs of transportation.

1.3 FORMAT

- .1 Organize data as instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by divisions under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

1.4 CONTENTS - EACH VOLUME

.1 Table of Contents: provide title of project; Date of submission; names.

- .1 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.5 AS-BUILTS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site for Consultant and Owner one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to Contract.
 - .5 Reviewed shop drawings, product data, and samples. Field test records.
 - .6 Inspection certificates.
 - .7 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Consultant.

1.6 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of black line opaque drawings.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

- .2 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
- .3 Field changes of dimension and detail.
- .4 Changes made by change orders.
- .5 Details not on original Contract Drawings.
- .6 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, and field test records, required by individual specifications sections.

1.7 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include test and balancing reports as specified in Division 15 and 16.

.15 Additional requirements: as specified in individual specification sections.

1.8 MATERIALS AND FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-Protection and Weather-Exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.

1.9 SPARE PARTS

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

1.10 MAINTENANCE MATERIALS

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

1.11 SPECIAL TOOLS

- .1 Provide special tools, in quantities specified in individual specification section.
- .2 Deliver to location as directed; place and store.
- .3 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

1.12 STORAGE, HANDLING AND PROTECTION

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.

- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and to satisfaction of Consultant.

1.13 WARRANTIES AND BONDS

- .1 Assemble in binder and submit upon acceptance of work. Organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .2 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .3 Respond in a timely manner to oral or written notification of required construction warranty repair work.

Part 2 Products

- 2.1 NOT USED
 - .1 Not Used.
- Part 3 Execution
- 3.1 NOT USED
 - .1 Not Used.

END OF SECTION

1 GENERAL

1.1 Conform to Sections of Division 1 as applicable.

1.2 References

CSA S350-M80(1998)	Code of Practice for Safety in Demolition of Structures
CEPA, 1988	Canadian Environmental Protection Act
CEAA, 1995	Canadian Environmental Assessment Act
TDGA, 1992	Transportation of Dangerous Goods Act
MVSA, 1995	Motor Vehicle Safety Act
OPSS 510, Nov 2006	Construction Specification for Removal
OPSS 1010, Apr 2004	Aggregates – Base, Subbase, Select Subgrade and Backfill Material

1.3 Definitions

Hand Demolition: systematic demolition of structures by workers using hand-held tools.

Mechanical Demolition: systematic demolition of structures using powered equipment.

Systematic Demolition: methodical dismantling of structure piece by piece, usually carried out in reverse order of construction.

Rapid Progressive Failure: method of demolition where key elements of structure are removed causing rapid and complete collapse of whole or part of structure.

1.4 Quality Assurance

1.4.1 Requirements:

Conform to The Occupational Health and Safety Act, Ontario Regulation 213/91, Amended to O.Reg. 85/04: Construction Projects.

Conform to Occupational Health and Safety Act Revised Regulation of Ontario, Regulation 838, Amended to O.Reg 104/04, Designated Substance - Asbestos on Construction Projects and in Building and Repair Operations;

Conform to OBC, especially Article 2.3.2.3 as applicable.

Conform to Fire Code, Regulation under the Fire Marshals Act especially Part 8.

1.4.2 Qualifications:

Employ for this work demolition company having 5 years Canadian experience in this type of work. If requested, submit proof of experience and list of projects.

1.5 **Project Conditions**

1.5.1 Existing Conditions:

- 1.5.1.1 Remove asphalt, curbs, sidewalks, fencing & gates in area of new work in preparation for new work.
- 1.5.1.4 Remove trees, sod and topsoil as may be required to regrade to new elevations for paving and as noted on the site servicing drawings.
- 1.5.1.4 Maintain road and fire access to the adjacent buildings at all times.
- 1.5.1.5 Schedule noisy operations with consideration for surrounding residents. Do not schedule noisy work before 7:00 am or after 8:00 pm.
- 1.5.1.6 Do not disturb existing paving intended to remain. Repair all damage which is the result of Work of this Contract.
- 1.5.1.7 Protect the public and staff in the area of work during the removals and upon completion of components of work at end of each work day.

1.5.2 Maintaining Traffic:

- 1.6.2.1 Do not close or obstruct streets, sidewalks, alleys, passageways without permits. Do not place or store materials in streets, alleys or passageways.
- 1.5.2.2 Conduct operations with minimum interference with roads, streets, driveways, alleys, passageways.

2 **PRODUCTS – Not applicable**

- 3 EXECUTION
- 3.1 Preparation

3.1.1 **Preliminary Survey**:

- 3.1.1.1 Before commencing demolition/removal operations, examine Site to determine type of construction, condition of structure and Site conditions.
- 3.1.1.2 Assess potential effect of removal of any part or parts on the remainder of structure before such part(s) are removed.
- 3.1.1.3 Contractor is responsible for scanning to ensure no lines and services are running below the surface before digging.

- 3.1.1.5 Contact municipal authorities or utility companies for assistance in locating and marking services passing under, through, overhead or adjacent to structure to be altered. Such services include:
 - electrical power lines
 - gas mains
 - oil pipelines
 - communication cables
 - water mains
 - drainage piping (storm and sanitary)

3.1.2 Protection:

- 3.1.2.1 Provide flagmen where necessary or appropriate to provide effective and safe access to Site to vehicular traffic and protection to pedestrian traffic.
- 3.1.3.2 Protect existing adjacent work against damages which might occur from falling debris or other causes due to work of this Section.
- 3.1.3.3 Where necessary to seal fire exits of adjoining or adjacent buildings, provide other exits in compliance with applicable fire safety and building regulations.
- 3.1.3.4 Where demolition operations prevent normal access to adjacent properties, provide and maintain suitable alternative access.
- 3.1.3.5 Maintain existing fire routes on Site.

3.2 Performance

3.2.1 General:

- 3.2.1.1 Ensure demolition work is supervised by competent foreman at all times.
- 3.2.1.3 Until acceptance, maintain and preserve active utilities traversing premises.
- 3.2.1.4 Keep work wetted down to minimize dust.
- 3.2.1.5 Minimize noise. Avoid use of noisy machinery outside working hours.

3.3 Disposal Of Waste Materials

- 3.3.1 Selling or burning of materials on Site is not permitted.
- 3.3.2 Conform to requirements of municipality's Works Department regarding disposal of waste materials.
- 3.3.2.1 Materials prohibited from municipality waste management facilities shall be removed from Site and dispose of at recycling companies specializing in recyclable materials.

End of Section.

1 GENERAL

1.1 General Requirements

- 1.1.1 Conform to Sections of Division 1 as applicable.
- 1.2 Source Quality Control
- 1.2.1 Conform to CSA-A23.2-14 for testing methods and procedures.

1.3 Reference Standards

1.3.1 Do cast-in-place concrete work in accordance with CSA-A23.1-14, and testing in accordance with CSA-A23.2-14, except where specified otherwise.

1.4 Product Delivery, Storage & Handling

1.4.1 Handle and store reinforcement and accessories to ensure that contamination by bond reducing or foreign matter, and damage to its fabricated form does not occur.

1.5 Environmental Requirements

1.5.1 Place concrete in cold and hot weather as specified in CSA A23.1-14.

2 PRODUCTS

2.1 Materials

- 2.1.1 Concrete materials as specified in CSA-A23.1/A23.2-14,
 - .1 Cement: Type 10, normal.
 - .2 Water: to CAN/CSA-A23.1.
 - .3 Aggregates: to CSA-A23.1/A23.2. Coarse aggregates to be normal density.
 - .4 Air entraining admixture: to ASTM C260.
 - .5 Chemical admixtures: to ASTM C494, or ASTM C1017. Consultant to approve accelerating or set retarding admixtures during cold and hot weather placing.
 - .6 Premoulded joint fillers:
 - .1 Bituminous impregnated fiber board: to ASTM D1751.
- 2.1.2 Formwork lumber: plywood and wood formwork materials to CSA-0121-17, CSA 086-14, CSA-086.1S1-98, CSA-0153-13(R2017).

2.1.3 Sonotubes – for gate/fence, signage posts

2.2 MIXES

- .1 Proportion normal density concrete in accordance with CSA-A23.1, to achieve concrete properties as stated in the structural notes.
- .2 Concrete shall be proportioned by the water-cement ratio, and to provide a plastic and workable mix without the formation of free lime on the surface.
- .3 Mix shall be designed for both strength and durability. Submit to the Inspection and Testing Agency the mix design for the different classes of concrete specified.
- .4 The amount of free moisture in the aggregate shall be deducted from the amount of mixing water being added.
- .5 Specified slumps shall be maintained and checked periodically with slump tests. For placement of concrete for slabs, the contractor may utilize mid-range plasticizer to achieve increased slumps, upon approval of the Engineer, and no additional cost to the contract.
- .6 Concrete shall be designed and proportioned to yield the specified ultimate and compressive strength at 28 days as determined by laboratory testing standard 150 x 300mm cylinders moist cured in the laboratory.
- .7 Classes of concrete: refer to the structural notes on drawings for classes of concrete.

3 EXECUTION

3.1 Examination

- 3.1.1 Verify lines, and levels and column centres before proceeding with formwork and ensure dimensions agree with drawings.
- 3.1.2 Hand trim sides and bottoms and remove loose earth from earth forms before placing concrete.
- 3.1.3 Examine formwork to ensure that it has been completed and adequately braced in place before commencing to place reinforcement.
- 3.1.4 Ensure that no water is present and no flooding water is permitted on foundation beds and skim coats where footings and other concrete work are to be placed. Place concrete only on frost-free ground. Remove previously frozen bearing surfaces.
- 3.1.5 Ensure that compacted fill has been placed to meet specified requirements; and that under-slab services have been installed, inspected, tested and approved.

3.2 Formwork

3.2.1 Construct forms to produce finished concrete conforming to shape, dimensions, locations and levels indicated within tolerances required by CSA-A23.1-14.

3.3 Reinforcement

- 3.3.1 Place reinforcement as specified in accordance with requirements in CSA-A23.1-14 and of sizes, at spacing, and in locations as shown on Drawings.
- 3.3.2 Support reinforcement by positive means which ensures cover for steel in accordance with CSA-A23.1-14, or as otherwise shown on Drawings. Install non-marring and approved supports at exposed concrete surfaces.
- 3.3.3 Do not cut reinforcement, either before or after concrete is placed, to permit incorporation of other Work.

3.4 Placing Concrete

- 3.4.1 Place concrete as specified in CSA-A23.1-14.
- 3.4.2 Inform Architect least 48 hours before each concrete placing operation.
- 3.4.3 Do not permit vertical free fall of concrete mix to exceed 1500 mm.
- 3.4.4 Do not use concrete mixed more than 1 hour after introduction of mixing water during hot weather conditions or 1-1/2 hours during other periods or concrete contaminated by foreign materials.
- 3.4.5 Thoroughly compact concrete during and after depositing by spacing and vibration to work the concrete around reinforcement and inserts so that finished concrete is dense, uniform and free of air holes or honeycombs.

3.4.6 Finishing.

- .1 Finish concrete in accordance with CSA-A23.1.
- .2 Use procedures acceptable to Consultant, or those noted in CSA-A23.1, to remove excess bleed water. Ensure surface is not damaged.
- .3 Use curing compounds compatible with applied finish on concrete surfaces. See architectural drawings and specifications for applied finish on concrete:
- 3.4.7 Joint fillers.
 - .1 Furnish filler for each joint in single piece for depth and width required for joint, unless otherwise authorized by Consultant.
 - .2 Use 12 mm thick joint filler to separate slabs-on-grade from vertical surfaces and extend joint filler from bottom of slab to within 12 mm of finished slab surface unless indicated otherwise.

3.5 **Defective Materials and Workmanship**

3.5.1 Materials or workmanship which fail to meet specified requirements may be rejected by Architect whenever found at any time prior to final acceptance of the work, regardless of previous inspection. If rejected, defective materials or work incorporating defective materials or workmanship shall be removed and replaced or repaired to satisfaction of Architect promptly, at no expense to Client.

END OF SECTION

1. GENERAL

1.1. Conform to Sections of Division 1 as applicable.

2. **PRODUCTS**

2.1. **MATERIALS**

2.1.1. Sign Post for Barrier Free Parking: (2) required, U-Channel Post for Parking Signs -8 ft, Galvanized, heavy duty steel, tapered end, 3/8" holes on 1' centres

3. **EXECUTION**

3.1. **INSTALLATION**

- 3.1.1. Build and erect work plumb, true, square, straight, level and accurate to sizes detailed, to reviewed shop drawings, free from distortion or defects detrimental to appearance and performance.
- 3.1.2. After erection and installation, clean work and apply field touch of same formula as shop coat primer to damaged or unpainted surface of shop primed material. Work primer into joints, crevices, interstices and open spaces.

3.2. Fasteners

3.2.1. Supply fasteners, anchors and accessories required for erection of work of this Section to reattach parking sign.

3.3. SCHEDULES

3.3.1. **General**: Provide miscellaneous metal work indicated on Drawings and not included in work of other Sections in addition to items listed below.

End of Section

1 General

1.1 General requirements

.1 Conform to Sections of Division 1 as applicable.

1.2 Related sections

.1 Section 21 33 00 - Excavation, Trenching and Backfilling.

1.3 Definitions

- .1 Clearing isolated trees consists of cutting off to not more than specified height above ground of designated trees, and disposing of felled trees and debris.
- .2 Grubbing consists of excavation and disposal of stumps and roots boulders and rock fragments of specified size to not less than a specified depth below existing ground surface.

1.4 Storage and protection

- .1 Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, utility lines, site appurtenances, water courses, root systems of trees which are to remain.
 - .1 Repair any damaged items to approval of Consultant.
 - .2 Replace any trees designated to remain, if damaged, as directed by Consultant.

2 Products

2.1 NOT USED

.1 Not Used.

3 EXECUTION

3.1 Preparation

- .1 Inspect site and verify with Consultant, items designated to remain.
- .2 Locate and protect utility lines. Preserve in operating condition active utilities traversing site.
- .3 Notify utility authorities before starting clearing and grubbing.

3.2 Isolated trees

- .1 Cut off isolated trees as indicated directed by Consultant at height of not more than 300 mm above ground surface.
- .2 Grub out isolated tree stumps.

3.3 Grubbing

- .1 Grub out stumps and roots to not less than 200 mm below ground surface.
- .2 Grub out visible rock fragments and boulders, greater than 300 mm in greatest dimension, but less than 0.25 m3.

3.4 Removal and disposal

.1 Remove cleared and grubbed materials off site.

3.5 Finished surface

.1 Leave ground surface in condition suitable for stripping of topsoil to approval of Consultant.

END OF SECTION

1 GENERAL

1.1 Conform to Sections of Division 1 as applicable.

1.2 Related Sections

1.2.1 Section 31 23 10: Excavating, Trenching & Backfilling

1.3 References

OPSS 206, Nov 2000 Construction Specification for Grading

1.4 Site Conditions

1.4.1 Known underground and surface utility lines and buried objects are as indicated on site plan. Contractor to establish location of other relevant buried lines before commencing work.

1.5 Protection

1.5.1 Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, surface or underground utility lines which are to remain. Make good any damage.

2 PRODUCTS

2.1 Materials

- 2.1.1 Fill material: Type 1 or 2 in accordance with Section 31 23 10 Excavating, Trenching and Backfilling.
- 2.1.2 Obtain approval from Consultant of excavated or graded material used as fill for grading work. Protect approved material from contamination.

3 EXECUTION

3.1 Grading

- 3.1.1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.
- 3.1.2 Grade to standards and minimum tolerances shown in OPSS 206.
- 3.1.3 Slope rough grade away from building 1:50 minimum.
- 3.1.4 Grade ditches to depth required for maximum run-off or as indicated.

- 3.1.5 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.
- 3.1.6 Compact filled and disturbed areas to corrected maximum dry density:
 - .1 85% under landscaped areas.
 - .2 100% under paved and walk areas.
- 3.1.7 Do not disturb soil within branch spread of trees or shrubs to remain.

3.2 Testing

- 3.2.1 Inspection and testing of soil compaction will be carried out by designated testing laboratory.
- 3.2.2 Costs of tests will be under Cash Allowance.

3.3 Surplus Material

- 3.3.1 Remove surplus material from site.
- 3.3.2 Remove material unsuitable for fill, grading or landscaping from site.

End of Section.

1 GENERAL

1.1 General Requirements

1.1.1 Conform to Sections of Division 1 as applicable.

1.2 Related Work

- 1.2.1 Section 02 41 00 Demolition
- 1.2.2 Section 31 22 13 Rough Grading
- 1.2.3 Section 32 12 16 Asphalt Paving

1.3 References

OPSS 206, Nov 2000	Grading
OPSS 501, Nov 2005	Compacting
OPSS 504, Nov 2005	Preservation, Protection and Reconstruction of Existing Facilities
OPSS 514, Apr 2008	Trenching, Backfilling and Compacting
OPSS 1010, Apr 2004	Aggregates – Base, Subbase, Select Subgrade and Backfill Material

1.4 Definitions

- 1.4.1 Rock excavation: excavation of material from solid masses of igneous, sedimentary or metamorphic rock which, prior to its removal, was integral with its parent mass, and boulders or rock fragments having individual volume in excess of 1 m3.
- 1.4.2 Common excavation: excavation of materials of whatever nature, which are not included under definitions of rock excavation including dense tills, hardpan, frozen materials and partially cemented materials which can be ripped and excavated with heavy construction equipment.
- 1.4.3 Topsoil: material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping and seeding.

1.5 Protection of Existing Features

- 1.5.1 Existing buried utilities and structures:
 - .1 Size, depth and location of known existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not

guaranteed.

- .2 Prior to commencing any excavation work, notify applicable owner or authorities, establish location and state of use of buried utilities and structures. Clearly mark such locations to prevent disturbance during work.
- .3 Identify lines that are to remain that service the building and other adjoining properties.
- .4 Confirm locations of buried utilities by carefully hand digging test excavations.
- .5 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered. When such services and utilities are encountered, immediately notify Consultant and protect, brace and support active services and utilities. Confirm findings of unknown services and utilities in writing. Obtain direction of Consultant before moving or otherwise disturbing utilities or structures.
- .6 Advise utility company to remove or re-route existing lines in area of excavation. Costs for such work will be paid by Owner.
- .7 Record location of maintained, re-routed and abandoned underground lines.
- .8 In the case of damage to, or cutting off of an essential service or utility, notify Consultant immediately and repair the service or utility under the Consultant's direction.
- .9 Inform Consultant about encountered services and utilities requiring adjustment or relocation to arrange for temporary disconnection and capping of services and utilities.
- .10 Make good and pay for damages to existing services and utilities resulting from Work.
- 1.5.2 Existing buildings and surface features:
 - .1 Conduct, with Consultant, condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, and paving, survey bench marks and monuments which may be affected by work.
 - .2 Protect existing buildings and surface features which may be affected by work from damage while work is in progress and repair damage resulting from work.
 - .3 Where excavation necessitates root or branch cutting, do so only in

accordance with the direction of the Consultant.

1.6 Site Conditions

- 1.6.1 Visit the site of work. Inspect the site and become thoroughly familiar with site conditions to determine extent of work required by this Section under this Contract.
- 1.6.2 Keep excavations and site free of standing water.
- 1.6.3 Protect bottoms of excavations from softening.
- 1.6.4 Dispose of water, including water containing silt.
- 1.6.5 Use approved methods to protect bottoms and sides of excavations from frost and freezing.
- 1.6.6 Protect from injury due to work of this Section all trees, shrubs and other vegetation indicated or designated by Consultant to be saved. Where approved by Consultant remove interfering tree branches without injury to tree trunks and cover scars with tree paint.
- 1.6.7 Wrap trees with burlap and boards to protect them from injury. Cover existing lawns with tarpaulins before placing earth on them and remove earth and tarpaulin as soon as possible.
- 1.6.8 Do not stockpile excavated material to interfere with site operation or drainage.

2 PRODUCTS

- 2.1 Materials
- 2.1.1 .1 Type 1 fill: Granular 'A' conforming to OPSS 1010.
 - .2 Type 2 fill: Granular 'B' conforming to OPSS 1010.
 - .3 Type 3 fill: Selected material from excavation or other sources, approved by Consultant for use intended, unfrozen and free from rocks larger than 75 mm, cinders, ashes, sods, refuse or other deleterious materials.
 - .4 Type 4 fill: Clean, washed, coarse bank or river sand free from clay, shale and organic matter.

3 EXECUTION

3.1 Site Preparation

- 3.1.1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.
- 3.1.2 Cut pavement or sidewalk neatly along limits of proposed excavation in order that surface may break evenly and cleanly.

3.2 Removal of Granular Material

- 3.2.1 Do not handle granular material while in wet or frozen condition or in any manner in which soil structure is adversely affected.
- 3.2.2 Commence removal of granular material of areas as directed by Consultant to established levels and grades noted on drawings.
- 3.2.3 Dispose of unused granular material off site to local quarry as part of Environmental Protection Requirements.

3.3 Stripping of Topsoil

- 3.3.1 Do not handle topsoil while in wet or frozen condition or in any manner in which soil structure is adversely affected.
- 3.3.2 Commence topsoil stripping of areas as directed by Consultant.
- 3.3.3 Strip topsoil and avoid mixing topsoil with subsoil.
- 3.3.4 Stockpile in locations as directed by Consultant. Stockpile height not to exceed 2 m.
- 3.3.5 Dispose of unused topsoil off site.

3.4 Stockpiling

- 3.4.1 Stockpile fill materials in areas designated by Consultant. Stockpile granular materials in manner to prevent segregation.
- 3.4.2 Should acceptable excavated material be removed from the site to extent that a deficiency will occur for backfilling or regrading requirements, this Section shall haul back to site, at his own expense, sufficient acceptable fill material to properly complete work of this Section.
- 3.4.3 No extra payment will be considered for the stockpiling or double handling of excavated materials which may be necessary.

3.4.4 Protect fill materials from contamination.

3.5 Grading

- 3.5.1 Cut or fill as necessary to bring site areas to required elevations and supply and place fill as necessary.
- 3.5.2 Rough grade to the depths below finish grades as required for paving.
- 3.5.3 Restore all grade levels, existing at commencement of work of this Section, which are not required to be changed but which have been disturbed. Level the grade where required and supply additional material if needed to bring areas to original grade levels.
- 3.5.4 Place the fill in horizontal layers and compact as specified.
- 3.5.5 Slope rough grade away from existing buildings at 1:50 minimum.
- 3.5.6 Unless otherwise specified, maintain rough grade generally not more than 150 mm above or below required elevations. For areas within 3 m of existing buildings, under areas to be paved and in areas where drainage is critical, maintain rough grade not more than 25 mm above or below require elevations.
- 3.5.7 Unless otherwise indicated, slope subgrade evenly away from building walls for 7.6 m. at not less than 20 mm per metre. Provide roundings at top and bottom of banks and at other breaks in grade.
- 3.5.8 Evenly grade where required to leave all unfinished areas free from pockets.
- 3.5.9 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.
- 3.5.10 Compact filled and disturbed areas to maximum dry density to ASTMD698-78, method, as follows:
 - .1 85% under landscaped areas.
 - .2 100% under paved and walk areas.

3.6 Excavation

- 3.6.1 Unless specified under other Sections, excavate to elevations and dimensions indicated or required for complete demolition and removal of structures. Correlate work with mechanical and electrical excavation requirements.
- 3.6.2 Remove concrete, masonry, paving, walks, footings, foundations, rubble and other obstructions encountered during excavation.

- 3.6.3 Excavation must not interfere with normal 45° splay of bearing from bottom of any footing for adjoining properties.
- 3.6.4 When complete, have Consultant inspect excavations to verify soil bearing capacity, depths and dimensions.
- 3.6.5 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw. Seal cuts with approved tree wound dressing.
- 3.6.6 Dispose of surplus and unsuitable excavated material off site.
- 3.6.7 Do not obstruct flow of surface drainage or natural watercourses.
- 3.6.8 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
- 3.6.9 Notify Consultant when soil at bottom of excavation appears unsuitable and proceed as directed by Consultant.
- 3.6.10 Obtain Consultant approval of completed excavation.
- 3.6.11 Remove unsuitable material from trench bottom to extent and depth as directed by Consultant.
- 3.6.12 Where required due to unauthorized over- excavation, correct as follows: Fill areas with Type 2 fill compacted to minimum of 95%.
- 3.6.13 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil. Clean out rock seams and fill with concrete mortar or grout to approval of Consultant.

3.8 Fill Types and Compaction

- 3.8.1 Use fill of types as indicated or specified below. Compaction densities are percentages of maximum densities obtained from ASTM D698-78 or ASTM D1557-78. Ensure equipment and workmanship provides uniform density of entire thickness of layer. Compact each layer to density specified before placing another layer of loose material. In confined spaces, where heavy compacting equipment cannot be utilized, use power actuated compactors or other suitable equipment to achieve required density.
- 3.8.2 Dimensions specified in following paragraphs are minimum dimensions of fill after compaction, unless otherwise specified, compaction densities are <u>Minimum Standard Proctor Density</u>.

- .1 Exterior side of perimeter walls and within perimeter of demolished structures: Use Type 2 fill to subgrade level and to underside of subbase or base course levels. Compact to 95%.
- .2 Within perimeter of building area: use Type 2 to underside of base course for floor slabs. Compact to 98%.
- .3 Under concrete slabs: provide 150 mm compacted thickness base course of Type 1 fill to underside of slab. Compact base course to 100%.
- .4 From minimum 1.2 m from face of exterior side of building perimeter or structure walls, including retaining walls: use type 3 fill to subgrade levels required. Compact to 95% density, except under areas to be sodded, seeded or planted, which shall be compacted to 85% density.
- .5 Compaction: compact bedding and immediate protective cover to 95% minimum density. In areas within buildings and where paving and walks occur, compact remainder of fill to 100% SPMDD. In other areas compact remainder of fill to at least 85% density.

3.9 Backfilling

- 3.9.1 In the context of this Section, reference to backfilling includes bedding.
- 3.9.2 Do not proceed with backfilling operations until Consultant has inspected and approved removals.
- 3.9.3 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.
- 3.9.4 Do not use backfill material which is frozen or contains ice, snow or debris.
- 3.9.5 Prior to placing fill, compact existing subgrade to obtain same compaction as specified for fill. Remove "soft" material and fill with approved material until specified compaction is obtained.

3.10 Inspection and Testing

- 3.10.1 Testing of materials and compaction will be carried out by testing laboratory designated by Consultant. Frequency of tests will be determined by Consultant.
- 3.10.2 Costs for inspection and testing to be by allowance as provided under Section 01 20 00 Cash Allowance.
- 3.10.3 Density test: tests will be conducted on compacted fill to ASTM D698-70 for Standard Proctor Density and to ASTM D1557 for Modified Proctor Density.

3.10.4 Frequency of Tests

- .1 Excavated surfaces: when undisturbed excavated surface is being prepared, make a series of 3 tests of surface for each 500 m2 area.
- .2 Fills under paving and floor and other slabs on grade, concrete walks: make arrangements for testing with Consultant.

3.11 Restoration

- 3.11.1 Upon completion of work, remove surplus materials and debris, trim slopes, and correct defects noted by Consultant.
- 3.11.2 Replace topsoil as directed by Consultant.
- 3.11.3 Reinstate pavement and sidewalks to condition and elevation which existed before excavation.
- 3.11.4 Clean and reinstate areas affected by work as directed by Consultant.

End of Section

1 GENERAL

1.1 General Requirements

1.1.1 Conform to Sections of Division 1 as applicable.

1.2 Related Sections

1.2.1 Section 31 23 10: Excavation, Trenching & Backfilling

1.3 References

OPSS 206	Construction Specification for Grading	
OPSS 310	Hot Mix Asphalt	
OPSS 314	Untreated Granular, Subbase, Base, Surface, Shoulder and Stockpiling	
OPSS 532	Pavement Marking	
OPSS 1003	Aggregates – Hot Mix Asphalt	
OPSS 1010	Aggregates – Base, Subbase, Select Subgrade and Backfill Material	
OPSS 1103	Emulsified Asphalt	
OPSS 1150	Hot Mix Asphalt	

1.4 Protection

- 1.4.1 Take measure to prevent damage to buildings, landscaping, curbs, sidewalks, trees, and adjacent property. Make good any damages.
- 1.4.2 Keep vehicular traffic off newly paved areas until paving surface temperature has cooled below 38°C. Do not permit stationary loads on pavement until 24 h after placement.
- 1.4.3 Provide access to buildings as required. Arrange paving schedule so as not to interfere with normal use of premises.

2 PRODUCTS

2.1 Materials

2.1.1 Granular sub-base (Granular B):

Crushed or uncrushed bank or pit gravel or stone obtained from an approved source and conforming to requirements OPSS 1010 for Granular 'B' aggregate.

2.1.2 Granular base (Granular 'A'):

Crushed gravel or stone, obtained from an approved source and conforming to requirements OPSS 1010 for Granular 'A' aggregate.

2.1.3 Hot mix asphalt:

HL8 binder course and HL4 surface course conforming to OPSS 1003 and 1150.

2.1.4 Asphaltic primer:

SS.1 Emulsified Asphalt as specified in OPSS 1103.

2.1.5 Traffic Paint:

Asphalt Paint and traffic marking paint for parking lot line painting, traffic marking and Barrier Free symbols (yellow colour)

3 EXECUTION

3.1 Inspection

- 3.1.1 Check grades indicated on site plan to ensure that final grades will be achieved with new graded subgrade surface.
- 3.1.2 Proof roll new graded subgrade surface with weight and type of roller approved by Architect and:
 - .1 Check for unstable areas.
 - .2 Check for areas requiring additional compaction.
 - .3 Notify Architect of unsatisfactory conditions.
- 3.1.3 Do not begin work of this Section until such conditions have been corrected and are ready to receive sub-base and base materials and/or paving.

3.2 Preparation

- 3.2.1 Remove ice, snow and water from surfaces before doing any work on such surfaces. Ensure sub-grades are not frozen.
- 3.2.2 Fine grade and maintain existing gravelled surfaces until asphalt paving is placed.
- 3.2.3 Fine grade new subgrade surfaces in areas to be paved to within 12 mm of specified grade and cross section, but not uniformly high or low, and maintain surface at required grade and compaction until sub-base course is placed.

3.3 Granular Sub-Base And Granular Base Courses

3.3.1 Place granular sub-base and base in accordance with OPSS 314.

- 3.3.2 Place granular sub-base to 400 mm compacted thickness. Place granular base to 100 mm compacted thickness.
- 3.3.3 Place in layers not exceeding 100 mm loose thickness.
- 3.3.4 Mechanically compact granular sub-base and base materials to density not less than 100% maximum Proctor dry density in accordance with ASTM D698-78 method D.
- 3.3.5 Grade and compact surface until it conforms to lines and grades required. If sub-base material becomes mixed with base material and is determined to be unacceptable by Architect remove materials affected; replace with clean, acceptable sub-base and base materials and re-compact.
- 3.3.6 Use water, if required, within acceptable limits, to aid compaction and dust control.
- 3.3.7 Each specified course thickness shall be thickness after compaction.

3.4 Pavement Thickness – refer to Drawings SG-1, Site Grading Plan, Pearson Engineering Ltd. Car Parking area 40mm HL4 Surface Course and 50 HL8/HL4 Base

3.5 Asphalt Concrete Paving

- 3.5.1 Unless otherwise specified, place hot mix asphaltic concrete paving in accordance with OPSS 310.
- 3.5.2 Do not place asphalt paving during winter months or during wet weather nor if base is water saturated. Remove loose and foreign material from surfaces to be paved. Do not place any asphaltic mixture, unless air temperature is minimum 7 deg. C and rising.
- 3.5.3 Place compacted asphaltic concrete paving in two layers of thickness indicated, in layers not exceeding 50 mm.
- 3.5.4 Spread asphalt mixture over base evenly and to correct thickness so that, after first passage of roller, a minimum amount of back patching will be required.
- 3.5.5 Minimum 120 deg C mix temperature required when spreading.
- 3.5.6 Maximum 150 deg C mix temperature permitted at any time.
- 3.5.7 Place mixture as continuously as possible. Compact each course with roller as soon as it can support roller weight without undue cracking or displacement.
- 3.5.8 Roller shall be power driven, minimum mass of 4.5 T, minimum wheel width 600 mm.
- 3.5.9 Roll until roller marks are eliminated. Compact to 95% Marshall Density

ASTM D1559-82.

- 3.5.10 Keep roller speed slow enough to avoid mix displacement and do not stop roller on fresh pavement.
- 3.5.11 Moisten roller wheels with water to prevent mix adhesion.
- 3.5.12 Compact mix with hot tampers or other approved equipment in areas inaccessible to roller. Effectively seal joints between paving and structures so that joints are completely watertight.
- 3.5.13 The finished paving shall have average thickness specified and shall not vary more than 6 mm from specified thickness at any point.
- 3.5.14 Finish surface smooth, true to grade to within 6 mm in 3 m.

3.6 Pavement Markings

- 3.6.1 Paint parking space divisions and other pavement markings in accordance with OPSS 532, manufacturer's recommendations and as indicated.
- 3.6.2 Use paint thinner in accordance with manufacturer's requirements.
- 3.6.3 For Barrier Free spaces refer to drawings for pavement markings.

End of Section.

1 GENERAL

- 1.1 Related Work
- 1.1.1 Cast-In Place Concrete

Section 03 30 00

2 PRODUCTS

2.1 Materials

- .1 Concrete mixes and materials: in accordance with OPSS 351, 353 and 1350.
- .2 Granular base: Granular A to OPSS 1010.
- .3 Fill material: Granular B Type 1 to OPSS 1010.

2.2 Specification

- .1 Concrete walks to OPSD 310.010 Concrete Sidewalk.
- .2 Concrete Curbs: refer to Site Grading Plan,

3 EXECUTION

3.1 Grade Preparation

- .1 Do grade preparation work in accordance with OPSS 206 and 314.
- .2 Construct embankments using excavated material free from organic matter or other objectionable materials.
 - .1 Dispose of surplus and unsuitable excavated material in approved location on site.
- .3 When constructing embankment provide for minimum 1.0m shoulders, where applicable, outside of neat lines of concrete.
- .4 Place fill in maximum 150mm layers and compact to at least 95% of maximum dry density to ASTM D698.

3.2 Granular Base

- .1 Obtain Consultant's approval of subgrade before placing granular base.
- .2 Place granular base material to lines, widths, and depths as indicated.
- .3 Compact granular base in maximum 150 mm layers to at least 95% of maximum density to ASTM D698.

3.3 Concrete

- .1 Obtain Consultant's approval of granular base prior to placing concrete.
- .2 Do concrete work in accordance with OPSS 351, 353 and 1350.
- .3 Immediately after floating, give sidewalk surface uniform broom finish to produce regular corrugations not exceeding 2mm deep, by drawing broom in direction normal to centre line.
- .4 Provide edging as indicated with 10mm radius edging tool.
- .5 Broom finish surfaces.

3.4 Tolerances

.1 Finish surfaces to within 3mm in 3m as measured with 3m straightedge placed on surface.

3.5 EXPANSION AND CONTRACTION JOINTS

- .1 Install tooled transverse contraction joints after floating, when concrete is stiff, but still plastic, at intervals of 1.5m.
- .2 Install expansion joints as directed by Consultant at intervals of 6m.
- .3 When sidewalk is adjacent to curb, make joints of curb, gutters and sidewalk coincide.

3.6 ISOLATION JOINTS

- .1 Install isolation joints around manholes and catch basins and along length adjacent to concrete curbs, catch basins, buildings, or permanent structure.
- .2 Install joint filler in isolation joints in accordance with Section 03 30 00 Cast-in-Place Concrete.
- .3 Seal isolation joints with sealant approved by Consultant.

3.7 Curing

- .1 Cure concrete in accordance with OPSS 351 and 353 as directed by Consultant.
- .2 Where burlap is used for moist curing, place two pre-wetted layers on concrete surface and keep continuously wet during curing period.
- .3 Apply curing compound evenly to form continuous film, in accordance with manufacturer's requirements.

3.6 Backfill

- .1 Allow concrete to cure for 3 days prior to backfilling.
- .2 Backfill to designated elevations with material as directed by Consultant.
 - .1 Compact and shape to required contours as indicated.

3.7 CLEANING

.1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

End of Section

1 GENERAL

1.1 WORK INCLUDED IN THIS SECTION

- 1.1.1 This Section includes furnishing and installing chain link fencing for security purpose consisting of but not limited to the following:
- 1.1.1.1. Galvanized or aluminum-coated-steel chain link fabric.
- 1.1.1.2. Galvanized-steel framework.
- 1.1.1.3. Gates.
- 1.1.2 Related Sections: The following Sections contain requirements that relate to this Section:

1.2 SUBMITTALS

- 1.2.1 General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- 1.2.2 Product Data: Submit manufacturer's technical specifications and installation instructions for fence and gate posts fabric, gates, gate operators and accessories.
- 1.2.3 Shop Drawings: Show location of fence, gates and each post, and details of post installation. Include details of footings, gates, posts, rails, frames, post tops, tension wires, bands and bars, bracing, ties, clips, spacing, installation and complete interfacing with locks and all other components. Provide specific elevations of all locations with grade changes. Indicate all additional bracing, supports and connection details to meet fence performance criteria.
- 1.2.4 Welder Certification: Submit certificates signed by Contractor certifying that welders comply with requirements specified under the 'Quality Assurance' Article.
- 1.2.5 Qualification Data: Submit for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include a list of completed projects with project name, addresses, names of Architects and owners and other information specified.

1.3 QUALITY ASSURANCE

- 1.3.1 Installer Qualifications: Engage an experienced installer who has at least five years experience and has completed at least five chain link fence projects of similar scope as indicated for this project with a successful construction record of in-service performance.
- 1.3.2 Welder qualifications:
- 1.3.2.1. Employ only welders certified under CSA W47.1-92 Classification 2.1; or AWS

D1.1 or B2.1 certified within past 12 months and qualified for AWS D1.3 and D9.1 welding processes.

- 1.3.2.2 Single-Source Responsibility: Obtain chain link fences and gates including accessories, fittings and fastenings from a single source.
- 1.3.3 Fence Grounding Installer Qualifications: Engage an experienced UL or ULC listed installer of UL96A Master Label lightning protection systems or equivalent under CAN/CSA-B72-M87(R1992). (The fence grounding will not, however require a Master Label).

1.4 **PROJECT CONDITIONS**

1.4.1 Field Measurements: Verify layout information for Fencing shown on the Drawings. Verify dimensions by field measurements.

1.5 **DELIVERY, STORAGE AND HANDLING**

- 1.5.1 Deliver material to the site in undamaged condition. Carefully store material off the ground to provide proper protection against oxidation.
- 1.5.2 When handling material, care shall be taken not to damage framing or fabric in any way. Damaged material including, but not limited to deformed fabric will be rejected and shall be removed from the site.

2. PRODUCTS

2.1 **MANUFACTURERS**

2.1.1 Subject to compliance with requirements provide products by one of the following or equal.

Amico Canada, Inc., Mississauga, Ontario

Anchor Fence, Inc., Baltimore, MD

Atlas Fence, Toronto, Ontario

Simcoe Fence, Barrie, Ontario

2.2 FABRIC

- 2.2.1 Steel Chain-Link Fence Fabric: Fabricated to comply with Chain Link Fence manufactures Institute (CLFMI) "Product Manual" and with requirements indicated below:
- 2.2.1.1. Mesh and Wire Size: 50 mm mesh, 3.76 mm. (9 ga.)
- 2.2.1.2. Coating: One of the following:
 - .1 ASTM A 817, Type I, aluminized.
 - .2 ASTM A 817, Type II, Class 2, zinc-coated (galvanized).

12190T

- 2.2.1.3. Fence (Vertical) Fabric: Installed upside down/reverse to Client Requirements. Fence Top Fabric Height Up to 2.4 m
 Fabric Width
 Selvage
 Knuckle top & bottom
- 2.2.1.4. Cover (Horizontal) Fabric: Stretch chain link fabric parallel to supports. Lap successive piece widths 150 mm minimum over supports. Select fabric width from 3 to 3.7 m to span at least 3 supports (2 spaces) typical, minimizing lap seams. Knuckle both selvages.

2.3 FRAMING

2.3.1 Round member sizes are given in actual outside diameter (OD) to the nearest thousandth of inches. Round fence posts and rails are often referred to in ASTM standard specifications by nominal pipe sizes (NPS) of the equivalent trade sizes in inches. The following indicates these equivalents:

Actual OD	NPS Size	Trade Size
mm		
42.2	1-1/4	1-5/8
48.3	1-1/2	2
60.3	2	2-1/2
73.0	2-1/2	3
88.9	3	3-1/2
101.6	3-1/2	4
168.3	6	6-5/8
219.1	8	8-5/8

2.3.2 Type I Round Pipe: Standard weight (schedule 40) galvanized-steel pipe conforming to ASTM F 1043, Group 1A heavy industrial requirements and minimum yield strength of 170 MPa according to ASTM F 1083; and conforming to ASTM F 1043 Type A coating inside and outside with not less than 550 g/m² zinc as determined by ASTM A90; and weights per foot as follows:

Actual OD	<u>Weight</u>	<u>NPS Size</u>
mm	kg/m	
42.2	3.4	1-1/4
48.3	4.0	1-1/2
60.3	5.4	2
73.0	8.6	2-1/2
88.9	11.3	3
101.6	13.6	3-1/2
168.3	28.3	6
219.1	42.5	8

2.3.3 Type II Round Pipe: Cold-formed, electric-welded steel pipe conforming to heavy industrial requirements of ASTM F 1043, Group IC, with minimum yield strength of

345 MPa, with protective coating system below according to ASTM F 1234 and weights per foot as follows:

2.3.3.1. Coatings: Conforming to ASTM F 1043, Outside, Type B with minimum 280 g/m²zinc after welding, a chromate conversion coating and clear polymer overcoat. Inside Type D, nominal 81% zinc pigmented coating, 0.0076 mm minimum thick or, Type B with a minimum of 280 g/m².

Actual OD	<u>Weight</u>	<u>NPS Size</u>
mm	kg/m	
42.2	2.72	1-1/4
48.3	3.37	1-1/2
60.3	4.62	2
73.0	6.88	2-1/2
88.9	8.45	3
101.6	9.76	3-1/2

- 2.3.4 Rails (Top, Intermediate, Bottom and Brace Rails): Manufacturer's longest lengths 5.2 to 6.4 m with expansion-type rail sleeve coupling. Provide intermediate bottom and brace rails continuous between posts.
- 2.3.4.1. Round Steel: 42.2 mm OD Type I or II steel pipe.
- 2.3.5 Fence Posts (Type I or II unless noted otherwise):

Fence Top	Line or Intermediate Post	End, Corner, Isolation and
Fabric Height	<u>Diameter</u>	Pull Post Diameter
Up to 2.4 m	60.3 mm	73.0 mm

2.3.6 Swing Gate Posts: Provide steel pipe gate posts sized as follows of either Type I or Type II round pipe unless otherwise indicated. Comply with ASTM F 900. Furnish gate posts as indicated below to support a single gate leaf or one leaf of a doublegate installation. Where also serving as a fence end post provide greater of sizes indicated for gate or end-posts.

Gate Leaf Width	Gate Post Diameter
Up to1.8 m	73.0 mm
Over 1.8 m to 3.7 m	101.6 mm Type I only
Over 3.7 to 5.5 m	168.3 mm Type I only
Over 5.5 to 7.3 m	219.1 mm Type I only

2.3.7 Gate Framework: Provide steel pipe gate frame members sized as follows of either Type I or Type II round pipe unless otherwise indicated. Comply with ASTM F900 for swing gates and ASTM F1184 Type I for overhead slide gates.

<u>Gate Top</u>	Swing Gate Frame
Fabric Height	Pipe Diameter
Up to 3.7 m	48.3 mm

2.4 **FITTINGS AND ACCESSORIES**

- 2.4.1 Material: Comply with ASTM F 626; galvanized iron or steel to suit manufacturer's standards. Unless specified otherwise, hot-dip galvanized pressed steel or cast iron fence fittings and accessories shall be coated with minimum 370 g/m² zinc as determined by ASTM A90 or CAN/CSA-G164-M92.
- 2.4.2 Post Caps: Provide tight press-fit weather tight closure cap for each post not capped with a barb arm.
- 2.4.3 Rail and Brace Ends: Provide manufacturer's standard galvanized-steel or cast iron rail ends with 8 x 38 mm carriage bolts or line rail clamp (boulevard) connectors with 10 mm bolts.
- 2.4.4 Top Rail Sleeves: Provide manufacturer's standard pressed steel or round steel tubing galvanized sleeve, 150 mm long minimum.
- 2.4.5 Tie Wires, Clips and Fasteners: Provide tie wires and clips(hog rings) of 3.8 mm diameter galvanized steel with a minimum of 250 g/m² of zinc coating according to ASTM A 641, Class 3. Where indicated, provide power driven wire/fabric fasteners complying with ASTM F626 and as follows: Security Fabricators, Inc., Sure-Loc.
- 2.4.6 Tension and Brace Bands: 19 mm wide by 2.7 mm thick minimum hot-dip galvanized steel with a minimum of 365 g/m² of zinc coating per sq. ft.
- 2.4.7 Tension (Stretcher) Bars: Hot -dip galvanized steel with a minimum length 50 mm less than the full height of fabric, a minimum cross section of 5 by 19 mm and a minimum of 365g/m² of zinc coating. Provide one bar for each gate and end post, and two for each corner and pull post.
- 2.4.8 Truss Rod Assembly: 10 mm diameter truss rod with turnbuckle or other adjustable tightener. Provide manufacturer's standard truss rod connections to brace rail end at line post and to brace band at terminal post.
- 2.4.9 Post Top Arms: Costumed fabricated galvanized structural steel angle arms, with hole for passage of top rail and with provision for anchorage to posts and attachment of tension wire to each arm. Weld to post. Provide special corner posts arms with matching features. Provide following type:
- 2.4.9.1. Single 45-degree arm for two rows of tension wire, one arm for each post.

2.5 **TENSION WIRE**

2.5.1 Tension Wire: 4.5 mm diameter metallic-coated steel marcelled tension wire conforming to ASTM A 824 with finish to match fabric; galvanized as follows:

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2.5.1.1. Coating Type II zinc in the following class as determined by ASTM A90.

Class 3, with a minimum coating weight of 610 g/m² of uncoated wire surface.

2.6 **GATES**

- 2.6.1 Assemble specified gate framing by welding. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware and accessories. Space frame members maximum of 2.4 m apart unless otherwise indicated.
- 2.6.1.1. Fabric: Same as for fence unless otherwise indicated. Secure fabric at vertical edges with tension bars and bands; and to top, bottom and intermediate framing with tie wires.
- 2.6.1.2. Bracing: Install diagonal cross-bracing consisting of 10 mm diameter adjustablelength truss rods on gates to ensure frame rigidity without sag or twist.
- 2.6.1.3. Gate Top:
 - 1. Extend vertical members of gate above top horizontal frame member and provide brace bands to secure wire to extended verticals for the following where indicated:
 - 3. Horizontally offset welded gate top framing to prevent gate top interference with adjacent fence top as gate opens.
- 2.6.2 Pedestrian Swing Gates: Comply with ASTM F900, except as otherwise indicated.
- 2.6.2.1. Swing Gate Hardware for Pedestrian Gate: Provide swing gates with ASTM A153 hot dip galvanized hardware as follows:

		Padlock
		Gates Only
Gate Top Fabric Height	<u>Hinges per</u>	Drop Rod
	<u>Gate Leaf</u>	<u>Guides</u>
Up to 2.1 mm	2	2

- 1. Hinges: Industrial hinge combination (malleable) cast iron, ball and socket, non-lift-off type with offset adapter for 180° swing. Pressed steel is not acceptable.
- 2 Padlock, Lock Preparations: Enable a single lock to secure an opening, Padlocks: Locate padlock eyes at waist height for padlocking. Padlocks provided by Client.

2.8 GALVANIZING REPAIR PAINT

2.8.1 Galvanizing Repair Paint: Provide one of the following:

Manufacturer	Product
Sherwin-Williams	Zinc Clad IV A Two Package Zinc Rich Epoxy
	Primer B69A8/B69V8
Southern Coatings	Chemtec 600 Hi Ratio Inorganic Zinc Rich Primer 1-
	4713.
Tnemec	Tnemec-Zinc, Zinc Rich Primer 90-97
Valspar	MZ-6 Hi Ratio Inorganic Zinc Rich 13-F-6

2.9 CONCRETE AND REINFORCEMENT

- 2.9.1 Concrete: CAN/CSA A23.1/A23.2-M90. Provide concrete consisting of Portland cement per ASTM C 150, aggregates per ASTM C33, and potable water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 21 Mpa. Use at least four sacks of cement per m³, 25 mm maximum size aggregate; 75 mm maximum slump.
- 2.9.2 Packaged Concrete Mix: Mix dry-packaged normal-weight concrete conforming to ASTM C 387 with clean water to obtain a 50 to 75 mm slump.
- 2.9.3 Reinforcement: Where indicated, provide deformed billet steel reinforcing bars meeting ASTM A615, Grade 60 or CAN/CSA-G30.18-M92.

3. EXECUTION

3.1 FENCE INSTALLATION

- 3.1.1 General: Install fence to comply with ASTM F 567. Erect fencing in straight lines between terminal posts (corner, end, gate, isolation, pull, or wall posts). Do not begin installation before final grading is complete, unless authorized in writing by Consultant.
- 3.1.1.1. Post Locations:
 - 1. Line Posts: Provide equally spaced up to 2.4 m o.c. unless otherwise indicated.
 - 2. Pull Posts: Provide, braced both ways, at abrupt changes in grade (15 degrees or more) and evenly spaced at intervals not exceeding 150 m between other terminal posts.
 - 3. Corner Posts: Provide braced both ways, at changes in direction of 15 degrees or more.
 - 4. End and Gate Posts: Provide at locations indicated and, where not indicated, as required. Provide bracing.

3.1.2 Tolerances

3.1.2.1. Post Deflection: Install all posts including line, end, gate, corner, pull and isolation posts to deflect, with full recovery, no more than 19 mm when a 220

Newtons load is applied to a post perpendicular to the fence fabric face at 1.5 m above grade.

- 3.1.2.2. Fence Fabric Deflection: Install and tension fence fabric, including horizontal and vertical applications, to defect, with full recovery, no more than 50 mm when a 130 Newtons load is applied to a fabric panel centered between framing members and perpendicular to the fence fabric face.
- 3.1.3 Excavation:
- 3.1.3.1. General:
 - 1. Satisfactory Soils: Excavate as indicated below.
 - 2. Unsatisfactory Soils: Notify Consultant where encountered. Where specifically authorized in writing by Town of Brant Representative, modify footing and excavation for adjustment as a change in accordance with Conditions of the Contract.
- 3.1.3.2. Post Holes: Hand excavate (using post-hole digger) or drill holes for posts to diameters and depths indicated.

	Excavated Earth	
Fence Top	Post Bottom	Hole Depth
Fabric Height		

1.8 or less	840	915
2.1	990	1070

Double-post hole diameters indicated below are for isolation posts sharing a common footing with an adjacent gate or other post. Drill separate holes in rock or concrete.

	<u>Excavated</u> Earth	<u>Cored</u> <u>Rock/Concrete</u>		
Single Or	Single Post	Double Post	Hole Diameter	Post Bottom/
<u>Largest Post</u> Outside	Hole Diameter	Hole Diameter		Hole Depth
Diameter (OD)				
mm	mm	mm	mm	mm
60.3	255		75	180
73.0	305	460	90	230
88.9	355	510	100	280
101.6	405	610	115	305
168.3	610	915	205	510
219.1	915	1220	255	660

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3.1.4	Concrete Placement and Posting Setting:			
3.1.4.1.	Posts Setting in Holes: Center and align posts in holes with post bottom depth indicated above.			
	1. Concrete for Excavated Earth Post Holes: Protect ground from concrete splatter. Place concrete aroun tamp for consolidation. Check each post for vertical hold in position during placement and finishing operat indicated, extend concrete post footings 50 mm abov crown to shed water.	nd posts and vibrate or and top alignment and tions. Unless otherwise		
3.1.4.2.	Post Setting on Base Plate: Where indicated or required, specified corresponding to post diameter. Center post and plate. Provide anchor bolts in diameters specified with length required.	weld all around to base		
3.1.4.4.	Miscellaneous Concrete Footings: Provide concrete for ga and other items as indicated or required. Place reinforcemen tied secure in position using support devices to prevent displac and vibrate or tamp for consolidation.	nt at locations indicated,		
3.1.4.5	Post Caps and Post Top Arms: Place on post immediately a accumulation of rainwater in posts. Before completion, tac each post top arm to post as specified at side opposite fabric	k weld or screw fasten		
3.1.5.1.	Where terminal posts rise above line post top arm height, p welded or brace band attached to terminal post.	provide side-mount arm		
3.1.5.2.	Install post top arms at terminal posts, including corner posts angle to maintain tips aligned vertically and horizontally with arm tips.			
3.1.6	Rails (Intermediate, Bottom, and Brace Rails):			
3.1.6.1.	Intermediate and Bottom Rails: Install intermediate and bo between posts and flush with post on fabric side, using rail of fittings where necessary.			

- 3.1.6.2. Brace Assemblies: Install braces at end, isolation, and gate posts and at both sides of corner and pull posts. Locate horizontal braces at midheight of fabric on fences with top rail and at two thirds fabric height on fences without rail, unless otherwise indicated. Install so posts are plumb when diagonal truss rod is under proper tension at no more than 50 degree angle from grade.
- 3.1.7 Tension Wire:
- 3.1.7.1. Fence Fabric Support: Pull tension wire taut, without sags, before stretching fence fabric. Tie tightly to each post, post cap, or barb arm with metal straps or wire of not less than same gauge and type. Allow no slack around wire.

- 1. Bottom Tension Wire: Install within 150 mm of fence fabric bottom.
- 2. Top Tension Wire: Install 50 mm from fence fabric top, through post cap or barb arm loop holes.
- 3.1.8 Fence Fabric: Install fence fabric as per manufacturer's standard. Handle, supporting and bracing as required, to prevent deformation or other damage to chain links. Provide 3 full twists (1-1/2 machine turns) at field cut selvages. Secure to framework as follows:
- 3.1.8.1. Tension (Stretcher) Bars: Thread through full height uncut fabric end picket and secure to end, gate, corner, isolation or pull post with tension bands spaced not over 330 mm o.c. Tighten as required to meet deflection tolerance for fence fabric as specified.
- 3.1.8.2. Clips (Hog Rings): Fasten tight, without slack, at 600 mm o.c. to top or bottom tension wire.
- 3.1.8.3. Tie Wires: Tie through fabric and around frame member engaging at least one strand of each fabric piece. Align twist with fabric on framework side of fabric. Twist pulling fabric in close contact with frame member and forcing tie wire to conform tightly to frame member shape. Twist both tie wire ends 3 full twists (1-1/2 machine turns). Cut off excess wire to prevent hand untwisting.
 - 1. Line Posts: Tie wires at 300 mm o.c.
 - 2. Fence Rails: Tie wires at 600 mm o.c.
 - 3. Gate Rails: Tie wires at 300 mm o.c.
 - 4. Parallel Fabric Pieces Lapped on a Frame Member: Tie wires at 300 mm o.c.
- 3.1.8.4 Power Driven Fasteners: Provide where indicated and at Contractor's option at locations indicated for tie wires above.

3.2 GATE INSTALLATION

- 3.2.1 Install gates plumb, level and secure for full opening without interference. Adjust hardware for smooth operation and lubricate. Install gates according to manufacturer's instructions, with no more than 75 mm clearance under closed gate.
- 3.2.2 Hardware: Install padlock hasps, hinges etc. as per manufacturer's recommendations, and reviewed and accepted shop drawings. Adjust and properly lubricate hardware to provide smooth, consistent trouble-free operation.

3.3 ADJUSTING AND CLEANING

3.3.1 Debris Control: Take extreme care to ensure that scrap materials generated during installation (including, wire ties, clips, fabric trimmings and other debris) are disposed of properly. Inspect fence and ground in the work area and removal all loose items from the site at the end of each work day and upon completion.

END OF SECTION

1 GENERAL

1.1 Conform to Sections of Division 1 as applicable.

1.2 Related Sections

- 1.2.1 Section 32 92 00: Sodding
- 1.2.2 Section 31 22 13: Rough Grading

1.3 References

OPSS 206, Nov 2000 Construction Specification for Grading

OPSS 570, Nov 2007 Topsoil

1.4 **Source Quality Control**

1.4.1 Inspection and testing of topsoil may be requested by Consultant at any time.

1.5 Scheduling Of Work

1.5.1 Schedule placing of topsoil and finish grading to permit sodding operations under optimum conditions.

2 PRODUCTS

2.1 Materials

- 2.1.1 Topsoil for sodded areas: friable, neither heavy clay nor of very light sandy nature consisting of 45% sand, 35% silt, 20% clay and pH value of 6-7. Free from subsoil, roots, vegetation, debris, toxic materials, stones over 50 mm dia.
- 2.1.2 Planting soil mix for planting of trees, shrubs and ground covers mix 9 parts topsoil with 1 part peat moss. Incorporate bone meal into planting soil at rate of 3 kg./cu.m. of soil mixture.
- 2.1.3 Peat moss:
 - .1 Derived from partially decomposed fibrous or cellular stems and leaves of species of Sphagnum Mosses.
 - .2 Elastic and homogeneous, brown in colour.
 - .3 Free of wood and deleterious material which could prohibit growth.
 - .4 Shredded particle minimum size: 5 mm.

3 EXECUTION

3.1 **Preparation of Existing Grade**

- 3.1.1 Work shall conform to OPSS 206.
- 3.1.2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage. Remove soil contaminated with toxic materials. Dispose of removed materials as directed by Consultant.
- 3.1.3 Cultivate entire area which is to receive topsoil to depth of 50 mm. Repeat cultivation in those areas where equipment used for hauling and spreading has compacted soil.
- 3.1.4 Remove surface debris, roots, vegetation, branches and stones in excess of 50 mm diameter.
- 3.1.5 Notify Consultant for inspection and approval of subgrade.

3.2 Spreading of Topsoil/Planting Soil

- 3.2.1 Work shall conform to OPSS 570.
- 3.2.2 Spread topsoil after Consultant has inspected and approved subgrade.
- 3.2.3 Spread topsoil with adequate moisture in uniform layers over approved, unfrozen subgrade, where, sodding or planting is indicated.
- 3.2.4 Apply topsoil as indicated to following minimum depths:
 - 100 mm for sodded areas
- 3.2.5 Apply planting soil to fill planters or to planting details.
- 3.2.6 Manually spread topsoil/planting soil around trees, shrubs and obstacles.

3.3 Finish Grading

- 3.3.1 Work shall conform to OPSS 206 and OPSS 570.
- 3.3.2 Fine grade and loosen top soil. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
- 3.3.3 Roll to consolidate topsoil for areas to be seeded leaving surface smooth, uniform, firm against deep foot printing, and with a fine loose texture to approval of Consultant.

3.4 Restoration of Stockpile Sites

3.4.1 Restore stockpile sites acceptable to Consultant.

3.5 Surplus Material

3.5.1 Dispose of materials not required off site.

End of Section.

1 GENERAL

1.1 General Requirements

1.1.1 Conform to Sections of Division 1 as applicable.

1.2 **Source Quality Control**

- 1.2.1 Obtain approval from Consultant of sod at source.
- 1.2.2 When proposed source of sod is approved, use no other source without written authorization.

1.3 Scheduling

1.3.1 Schedule sod laying to coincide with preparation of soil surface.

2 PRODUCTS

2.1 Materials

- 2.1.1 Nursery sod: Quality and source to comply with standards outlined in "Guide Specification for Nursery Stock", latest edition, published by Canadian Nursery Trades Association.
 - .1 Number one Kentucky Bluegrass/Fescue Sod grown from minimum 40% Kentucky Bluegrass, 30% Creeping Red Fescue.
 - .2 Broken, dry, discoloured pieces will be rejected by the Consultant.
- 2.1.2 Water: potable
- 2.1.3 Fertilizer: Complete, synthetic, slow release fertilizer with 35% water soluble nitrogen.
- 2.1.4 Herbicide: type, rate, and method of application subject to approval by Consultant.

3 EXECUTION

3.1 Laying of Sod

- 3.1.1 Prior to sodding, obtain approval from Consultant that finished grade and depth of topsoil are satisfactory. Sodding during excessively wet conditions, at freezing temperatures or over frozen soil is not acceptable.
- 3.1.2 Lay sod within 36 h of being lifted.

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- 3.1.3 Lay sod sections in rows, longitudinally, along contours of slopes, joints staggered. Butt sections closely without overlapping or leaving gaps between sections. Cut out irregular or thin sections with sharp implements.
- 3.1.4 Provide close contact between sod and soil by light rolling. Use of heavy roller to correct irregularities in grade is not permitted.
- 3.1.5 Water sod immediately after laying to obtain moisture penetration into top 100 mm of topsoil.

3.2 Maintenance

- 3.2.1 Maintain sodded area from start of installation until final acceptance.
- 3.2.2 Water sodded areas in sufficient quantities and at frequency required to maintain optimum soil moisture condition to depth of 75 to 100 mm.
- 3.2.3 Cut grass to 40 mm when it reaches height of 60 mm. Remove clippings which will smother grassed areas.
- 3.2.4 Maintain sodded areas weed free.
- 3.2.5 Fertilize sodded areas one month after sodding with 2:1:1 ratio fertilizer. Spread evenly at rate of .05 kg of nitrogen/100 m2 and water in well.

3.3 Acceptance

- 3.3.1 Sodded areas will be accepted at final inspection provided that:
 - .1 Sodded areas are properly established.
 - .2 Sod is free of bare and dead spots and without weeds.
 - .3 No surface soil is visible when grass has been cut to height of 40 mm.
 - .4 Sodded areas have been cut minimum 2 times.
- 3.3.2 Areas sodded in fall will be accepted in following spring one month after start of growing season provided acceptance conditions are fulfilled.

End of Section.

1 GENERAL

1.1 GENERAL REQUIREMENTS

- 1.1.1 Division One, General Requirements is part of this Section and shall apply as if repeated here.
- 1.1.2 Refer to Drawing L1 for complete list of Trees, Shrubs and Plant material.

1.2 SOURCE QUALITY CONTROL

- 1.2.1 Obtain approval of plant material at source.
- 1.2.2 Notify Consultant of source of material at least 7 days in advance of shipment. No work under this Section to proceed without approval.
- 1.2.3 Acceptance of plant material at its source does not prevent rejection on site prior to or after planting operations

1.3 SHIPMENT AND PRE-PLANTING CARE

- 1.3.1 Co-ordinate shipping of plants and excavation of holes to ensure minimum time lapse between digging and planting.
- 1.3.2 Tie branches of trees and shrubs securely and protect plant material against abrasion, exposure and extreme temperature damage during transit. Avoid binding of planting stock with rope or wire which could damage bark, break branches or destroy natural shape of plant. Give full support to root ball of large trees during lifting.
- 1.3.3 Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peat moss, saw dust or other acceptable material to prevent loss of moisture during transit and storage.
- 1.3.4 Remove broken and damaged roots with sharp pruning shears. Make clean cut and cover cuts over 10 mm with wound dressing.
- 1.3.5 Keep roots moist and protected from sun and winds. Heel-in trees and shrubs, which cannot be planted immediately, in shaded areas and water well.

1.4 GUARANTEE

- 1.4.1 The Contractor hereby warrants that plant material as itemized on plant list will remain free of defects in accordance with the Instructions to Bidders, for 2 full growth seasons.
- 1.4.2 End-of-warranty inspection will be conducted by Consultant.
- 1.4.3 The Consultant reserves the right to extend Contractor's warranty responsibilities for an additional 1 year if, at end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.

1.5 REPLACEMENTS

- 1.5.1 During warranty period, remove from site any plant material that has died or failed to grow satisfactorily as determined by Consultant.
- 1.5.2 Replace plant material next season.
- 1.5.3 Extend warranty on replacement plant material for a period equal to the original warranty period.
- 1.5.4 Continue such replacement and warranty until plant material is acceptable.

2 PRODUCTS

2.1 PLANT MATERIAL

- 2.1.1 Comply with Specifications for Nursery Stock, published by the Canadian Nursery Trades Association referring to size and development of plant material and root ball. Measure plants when branches in their natural position. Height and spread dimensions refer to main body of plant and not from branch tip to branch tip. Use trees and shrubs of No. 1 grade.
- 2.1.2 Plant material obtained from areas with milder climatic conditions from those of site acceptable only when moved to site prior to the breaking of buds in their original location and heeled-in, in a protected area until conditions suitable for planting.
- 2.1.3 Use trees and shrubs with strong fibrous root system free of disease, insects, defects or injuries and structurally sound. Use trees with straight trunks, well and characteristically branched for species. Plants must have been root pruned regularly, but not later than one growing season prior to arrival on site.
- 2.1.4 Large trees must have been half root pruned during each of two successive growing seasons, the latter at least one growing season prior to arrival on site.
- 2.1.5 Cold storage: approval required for plant material which has been in cold storage.
- 2.1.6 Container-grown stock: acceptable if containers are large enough for root development. Trees and shrubs must have grown in container for minimum of one growing season but not longer than two. Root system must be able to "hold" soil when removed from container. Plants that have become root bound are not acceptable. Container stock must have been fertilized with slow releasing fertilizer.

- 2.1.7 Balled and burlapped: coniferous and broadleafed evergreens over 500 mm tall must be dug with soil ball. Deciduous trees in excess of 3 m height must have been dug with large firm ball. Root balls must include 75% of fibrous and feeder root system. This excludes use of native trees grown in light sandy or rocky soil. Secure root balls with burlap, heavy twine and rope. For large trees, wrap ball in double layer of burlap and drum lace with minimum 10 mm diameter rope. Protect root balls against sudden changes in temperature and exposure to heavy rainfall.
- 2.1.8 Tree spade dug material: dig plant material with mechanized digging equipment of hydraulic spade or clam-shell type. Root balls to satisfy CNTA standards. Lift root ball from hole, place in wire basket designed for purpose and line with burlap. Replace root ball and tie basket to ball with heavy rope. Take care not to injure trunk of tree with wire basket ties or rope.
- 2.1.9 Substitutions to plant material as indicated on planting plan not permitted unless written approval has been obtained as to type, variety, and size. Plant substitutions must be of similar species and of equal size as those originally specified.

2.2 MATERIALS

- 2.2.1 Water: potable and free of minerals which may be detrimental to growth.
- 2.2.2 Stakes: T-bar, steel, 40 x 40 x 5 x 2440 mm.
- 2.2.3 Cables and accessories: factory galvanized cables, wire tighteners, eyebolts and turnbuckles. Use turnbuckles with 150 mm long eyebolts a 10 mm diameter threaded opening for tightening, or use approved horticultural guy wire tightener.
- 2.2.4 Guy wires: No. 10 galvanized steel wire strand to CSA G4-M1977 with turnbuckles. Trees 75 to 150 mm caliper use 3 mm wire.
- 2.2.5 Eyebolts: coarse threaded galvanized steel.
- 2.2.6 Tree rings: fabricated from 3 mm galvanized wire encased in two ply reinforced 12 mm diameter rubber garden hose or equivalent.
- 2.2.7 Tree wrapping material: new, clean, plain burlap strips, minimum 2.5 kg/m² mass and 150 mm wide, and twine fastener.
- 2.2.8 Anchors: T-bar.

2.2.9 Mulch:

- 2.2.9.1 Shredded bark mulch: chips from bark of coniferous trees, varying in size from 50 mm to 75 mm and 5 mm thick.
- 2.2.10 Wound dressing: horticulturally accepted non-toxic, non-hardening emulsion.

3 EXECUTION

3.1 PLANTING TIMING

- 3.1.1 Plant deciduous plant material during dormant period before buds have broken or before growing season has been completed. Plant material noted for spring planting only, must be planted in dormant period.
- 3.1.2 Plant material imported from region with warmer climatic conditions may only be planted in early spring.
- 3.1.3 Plant evergreens in spring before bud break. Planting o such stock with root balls may start after middle of August. Apply anti-desiccant to evergreens before digging.
- 3.1.4 Plant only under conditions that are conducive to health and physical conditions of plants.
- 3.1.5 When permission has been obtained, trees, shrubs and groundcovers growing in containers may be planted throughout the growing season.
- 3.1.6 Provide planting schedule. Extending planting operations over long period using limited crew will not be accepted.

3.2 EXCAVATION

- 3.2.1 Stake out locations of trees and planting beds as per planting plan. Obtain approval prior to excavating.
- 3.2.2 Excavate to width and depth as indicated.
- 3.2.3 Scarify sides of planting hole.
- 3.2.4 Provide drainage for planting holes in heavy soil if natural drainage does not exist. Have method approved.
- 3.2.5 Remove water which enters excavations prior to planting. Ensure source of water is not ground water.

3.3 PLANTING

- 3.3.1 Loosen bottom of planting hole to depth of 150 to 200 mm. Cover bottom of each excavation with minimum of 150 mm of topsoil mixture.
- 3.3.2 Plant trees and shrubs vertically with roots placed straight out in hole. Orient plant material to give best appearance in relation to structure, roads and walks.
- 3.3.3 Place plant material to depth equal to depth they were originally growing in nursery.
- 3.3.4 With balled and burlapped root balls, loosen burlap and cut away minimum top 1/3 without disturbing root ball. Do not pull burlap or rope from under root ball. With

container stock, remove entire container without disturbing root ball. Nonbiodegradable wrappings must be removed.

- 3.3.5 Tamp soil around root system in layers of 150 mm eliminating air voids. Frozen or saturated planting soil is unacceptable. When 2/3 of planting soil has been placed, fill hole with water. After water has completely penetrated into soil, complete backfilling.
- 3.3.6 Build 100 mm deep saucer around outer edge of hole to assist with maintenance watering.
- 3.3.7 When planting is completed, give surface of planting saucer dressing of organic 10-6-4 fertilizer at rate of 12 kg/100 m2 for shrub beds or 40 to 50g/mm of caliper trees. Mix fertilizer thoroughly with top layer of planting soil and water in well.

3.4 TRUNK PROTECTION

3.4.1 Wrap deciduous trees, which caliper is 50 to 150 mm, spirally from ground up, to height of second branches. Treat trunk with paste of long residual insecticide, lindane or equivalent before applying wrapping. Secure burlap with binder twine wound in opposite direction to burlap at 100 mm intervals. Place wrapping neatly and snugly with 40 mm overlap.

3.5 TREE SUPPORT

- 3.5.1 Install tree supports as indicated on details.
- 3.5.2 Staking for trees up to 3 m and evergreens up to 2 m in height. Backfill planting hole 2/3, drive T-bar stake 900 mm into bottom of pit, taking care not to damage main roots. Place stake or anchor 150 mm away from trunk on side of prevailing wind. Fasten trunk to stake with tree-ring. Different methods of fastening tree trunk to stake are acceptable if no damage to bark of tree will occur. Obtain approval prior to using other methods.
- 3.5.3 Tree stakes and wire mesh: protect trees indicated requiring tree guards. Encircle staked trees with galvanized wire mesh. Leave space of at least 150 mm between tree trunk and wire mesh. Fasten wire mesh to stake at 4 places using 3 mm wire.

3.5.4 Guy wire trees up to 150 mm caliper:

- 3.5.4.1 For deciduous trees taller than 3 m and evergreens taller than 2 m, fasten three wires to tree where a branch will prevent slipping down. Use tree rings to prevent abrasion of bark.
- 3.5.4.2 Fasten guy wires to anchors at distance from tree base equal to height of where wire is attached to trunk. Break wires, install wire tighteners and tighten slightly.
- 3.5.4.3 Where guy wires are used close to pedestrian traffic ways, fasten metal flags to wires to make them clearly visible.
- 3.5.4.4 Use sufficient number of guy wires to support large shrubs.

3.6 MULCHING

3.6.1 Obtain approval of planting before mulching material is applied. Loosen soil in planting beds and pits and remove debris and weeds. Spread mulch to minimum thickness of 50 mm. Mulch material susceptible to blowing must be moistened and mixed with topsoil before applying. When mulching is placed in fall, pace immediately after planting. When mulch is placed in spring, wait until soil has warmed up.

3.7 MAINTENANCE

- 3.7.1 Water once a week for first 4 weeks and then sufficiently thereafter to maintain optimum growing conditions. Ensure adequate moisture in root zone at freeze-up.
- 3.7.2 Keep soils, within confines of planting saucer around trees and planting beds, shallowly cultivated and free from weeds.
- 3.7.3 Spray plants to combat pests and diseases. Do not use sprays prohibited by Agriculture Canada.
- 3.7.4 Keep tree guards and guy wires in proper repair.
- 3.7.5 Provide adequate protection against winter damage including damage caused by rodents.
- 3.7.6 Maintain plant material from date of planting up to end of warranty period.
- 3.7.7 Remove dead or broken branches from plant material.
- 3.7.8 Remove trunk wrapping, tree stakes and eyebolts at end of warranty period.

END OF SECTION