

Request for Proposal

Document Number: 2020-546P

Document Title: CONSTRUCTION SERVICES FOR LOCALIZED INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE FACILITIES WITHIN THE REGION OF PEEL

Date Issued: Friday, July 10, 2020

Bidders Meeting date: Friday, July 17, 2020

ELECTRONIC BID SUBMISSIONS ONLY shall be received by the Agency through the Bidding System no later than:

**12:00 noon local time
Tuesday, August 4, 2020**

It is the Bidder's sole responsibility to ensure that:

- a Bidder's representative attends the mandatory site visit where applicable
- the submission is received electronically by the Agency through the Bidding System by the date and time specified above
- the submission is accompanied by all required documentation including but not limited to a digital bid bond in the amount of \$200,000

**Procurement Representative: Glayton Campbell, Senior Procurement Analyst
Telephone Number: (905) 791-7800, ext. 4211**

For **CONSTRUCTION SERVICES FOR LOCALIZED INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE FACILITIES WITHIN THE REGION OF PEEL** as required, and as specified within this Document.

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1. **DEFINITIONS**

- “Agency” means The Regional Municipality of Peel, Peel Regional Police, Peel Housing Corporation and any other government or agency or board on behalf of which The Regional Municipality of Peel is acting and for the purposes of the performance of the Contract shall mean the municipality or entity awarding the Contract. For purposes of the Contract, “Agency” shall include “Owner”.
- (b) “Bidder” means any proponent, respondent or other person or entity who has obtained official procurement documents for the purpose of submitting, or who has submitted a Bidder Submission in response to the Document. Furthermore, the definition of “Bidder” shall include any entity affiliated or related to the Bidder (including any entity with the same directing mind as the Bidder) as determined in the discretion of the Director of Procurement, in consultation with the Regional Solicitor.
- (c) “Bidder Submission” means the document as completed by the Bidder for the purpose of offering to sell to the Agency the goods and/or services specified in the Document, and includes but is not limited to quotations, tenders and proposals.
- (d) “Bidding System” means the electronic system used by the Agency for its public tenders, bids and request for proposals at the following website: peelregion.bidsandtenders.ca, which is required to be used for all dissemination of information by or on behalf of the Agency and all submissions from Bidders for this Document.
- (e) “Document” means the document describing the goods and/or services to be purchased and the terms upon which the goods and/or services are to be purchased and includes, without limitation, those documents referenced on the index of the Document and such addenda as may be issued by the Agency from time to time.
- (f) “Operator” means the Owner’s operations and maintenance employees, and/or contract operator of the site where the Work is being performed.
- (g) “Procurement Representative” means the person named as the Procurement Representative or designate on the Document.
- (h) “Region of Peel” has the same meaning as the Agency.
- (i) “Vendor” means the successful Bidder and includes the term “Contractor” who enters into the Contract with the Agency for the provision of the goods and/or services set out in this Document.
- (J) “Consultant” means **Green Propeller Design**.

2. **INFORMATION AND COMMUNICATIONS**

- 2.1 Any questions or information required regarding this Document must be submitted through the Bidding System via peelregion.bidsandtenders.ca by clicking the ‘Submit a Question’ button for the selected bid opportunity at least four working days prior to closing. Do not submit your questions via e-mail. No oral communications will be considered binding.
- 2.2 Any Bidder who requests and/or receives any information, with regards to this Document, by any person(s) other than the Procurement

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Representative or designate, may be disqualified from further consideration.

- 2.3 It is recommended that vendors add noreply@bidsandtenders.ca to their “safe senders” lists in their e-mail systems and monitor their spam/ clutter/ junk filters to ensure they do not miss automatically generated messages sent by bidsandtenders.ca that relate to this bid opportunity.

3. **BIDDER SUBMISSIONS**

- 3.1 This Document is available to Bidders at peelregion.bidsandtenders.ca.
- 3.2 Only Bidders that are registered as a Plan Taker for this Document with Bids and Tenders at peelregion.bidsandtenders.ca and have obtained this Document from Bids and Tenders or the Agency, may submit a Bidder Submission.

Should the Agency receive a Bidder Submission that is subsequently found to be from a Bidder that is not a registered Plan Taker with Bids and Tenders at peelregion.bidsandtenders.ca, and the Bidder did not obtain the Document from Bids and Tenders or the Agency, the Agency reserves the right to reject the Bidder Submission as non-compliant and give it no further consideration for contract award.

- 3.3 **Bidders shall not make any changes or alterations to the Document as issued by the Agency on the Region of Peel’s website.** The Bidder Submission of any Bidder found prior to award to have made such alterations shall be disqualified by the Agency and shall be given no further consideration.

In the event that following an award an alteration is discovered to have been made by the successful Bidder, the Document as issued by the Agency and made available on the Agency’s website shall be deemed to contain the governing terms and conditions between the parties, and any alterations made to it by the Bidder shall be of no force or effect. The Agency shall further have the right, at its sole option, to terminate any Contract with a Bidder who, subsequent to award, is found by the Agency to have altered the Agency’s Document. This right is in addition to and without prejudice to all other rights, remedies, actions or alternatives that may be available to the Agency.

- 3.4 Any documents forming part of a Bidder Submission uploaded to peelregion.bidsandtenders.ca by the Bidder in response to the Document must:
- 3.4.1 NOT have a security password.
 - 3.4.2 Not be defective, corrupted or blank.
 - 3.4.3 Be able to be opened and viewed by the Agency.

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- 3.5 The Agency shall disqualify a Bidder Submission that contains documents that cannot be opened and verified by the Agency.
- 3.6 For the purposes of interpretation, all capitalized terms used herein shall have the same meanings ascribed thereto in the Document.

4. **BIDDERS MEETING**

A Bidders Meeting is in order to ascertain the Work requirements. It is the responsibility of the Bidder to notify and ensure that any and all subcontractors, if required, are present for the meeting. The Bidders Meeting will be held as indicated in the Agency's Bidding System.

The Bidders Meeting will be held through Microsoft Teams Meeting on Friday, July 17, 2020 starting at 11:00 AM. The details for the Microsoft Teams Meeting are as follows:

[Join Microsoft Teams Meeting](#)

[+1 647-749-9098](tel:+16477499098) Canada, Toronto (Toll)

[\(844\) 589-6880](tel:8445896880) Canada (Toll-free)

Conference ID: 212 976 645#

Region of Peel | Working with You

5. **SITE VIDEOS**

Bidders are required to review the videos in the links below to obtain additional site details. Bidders shall review the videos prior to the Bidders Meeting in clause 4 above.

<https://www.youtube.com/playlist?list=PLmUURpDxUq-6aVspxT6sgKEZvh0RYt7av>

6. **DATE AND PLACE FOR RECEIVING BIDDER SUBMISSIONS AND ACCEPTANCE PERIOD**

6.1 ELECTRONIC BID SUBMISSIONS ONLY shall be received by the Agency through the Bidding System and must be received **on or before 12:00 noon local time in Brampton, Ontario on Tuesday, August 4, 2020.**

6.2 The closing date and time shall be determined by the Agency's Bidding System.

6.3 Bidder Submissions submitted and/or received by any other method will be disqualified by the Agency unless instructed otherwise by published addenda in respect of the Document.

6.4 Only documents found on the Region of Peel's website at peelregion.bidsandtenders.ca are to be considered "official" documents. The Region of Peel accepts no responsibility for the accuracy or completeness of information found on other websites. The onus is on the Bidder to check the Region of Peel's website to verify they have received

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all relevant information. The Bidder risks submitting a non-compliant bid if addenda or other required information is missing, and disqualification could result.

- 6.5 It is the Bidder's sole responsibility to ensure their Bidder Submission is received by the time and date specified within the Document. The receipt of Bidder Submissions can be delayed due to a number of factors including, but not limited to, "internet traffic", file transfer size, and transmission speed. The Bidder should allow sufficient time to upload its Bidder Submission, including any attachments. Late Bidder Submissions will not be accepted by the Agency's Bidding System.
- 6.6 A Bidder Submission will only be considered to be submitted once it has been RECEIVED by the Agency in its Bidding System, regardless of when the Bidder Submission was submitted by the Bidder.
- 6.7 Bidders will be sent a confirmation e-mail by the Agency's Bidding System to the e-mail address provided by the Bidder when it registered as a Plan Taker in the Bidding System for the Document advising that its Bidder Submission was submitted successfully. Bidders should **not** consider its Bidder Submission to have been submitted until it has received the confirmation e-mail.
- 6.8 The Bidder is solely responsible for the delivery of its Bidder Submission in the manner and by the date and time prescribed in the Document. Each Bidder is responsible for the actual delivery of its Bidder Submission prior to the closing time and closing date.
- 6.9 The Agency is not responsible for any incomplete or misdirected Bidder Submissions due to electronic technical problems arising out of the Bidder's use of the Agency's Bidding System.
- 6.10 Bidder Submissions received by the Agency in accordance with the terms and conditions of the Document shall be irrevocable and open for acceptance for a period of 120 days following the date of the Bidder Submission closing.
7. **ADDENDA**
Addenda, if required, issued by the Procurement Representative and related to this Contract shall hereby form part of the Contract.

Any addenda related to this Contract will be posted through the Bidding System at peelregion.bidsandtenders.ca. Although the Bidding System will attempt to notify registered Bidders of when addenda are posted on the Bidding System, the Agency does not guarantee any receipt of notifications by Bidders and waives any responsibility. **It is the sole responsibility of Bidders to check the Bidding System often to inform themselves of any posted addenda.**

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Bidders shall acknowledge receipt of any addenda when submitting their Bidder Submission through the Bidding System. Bidders shall check a box for each addendum and any applicable attachments that have been issued before a Bidder can submit their Bidder Submission online all in accordance with the terms and conditions of the Document and the Bidding System.

The Agency encourages Bidders not to submit their Bid Submission prior to forty-eight hours before the Document closing time and date, in the event that an addendum is issued. If a Bidder submits their Bidder Submission prior to this or at any time prior to the Document closing and an addendum is issued by the Agency, the Bidding System shall WITHDRAW their Bidder Submission and change their Bidder Submission to an INCOMPLETE STATUS (NOT accepted by the Agency) and the withdrawn Bidder Submission can be viewed by the Bidder in the "MY BIDS" section of the Bidding System. The Bidder is solely responsible to:

- i) make any required adjustments to their Bidder Submission;
- ii) acknowledge the addendum/addenda; and
- iii) ensure the re-submitted Bidder Submission is RECEIVED by the Agency through the Bidding System no later than 12:00 noon local time on the Document closing date.

NOTES TO BIDDERS: Additional company contacts are recommended for the reasons outlined below:

- Do not invite any additional contacts that you do not want to have access to view, edit, submit and/or withdraw or who may be in direct competition, for example a company may have two divisions that could compete for the same bid opportunity.
- You are strongly urged, when creating or updating a Bidding System Bidder account, to add additional company contacts to create their own login to the Bidding System. This will permit your invited contacts that have created their own login to manage (register, submit, edit and withdraw) Bids which your company is a Registered Plan Taker for. In the event you are on vacation, or due to illness, etc., these additional contacts may act on your company's behalf and have the authority to receive addendum notifications from the Bidding System and where permitted by the terms and conditions of the Document, to submit Bidder Submissions electronically through the Bidding System and/or withdraw and/or edit and/or acknowledge addendum/addenda, on your behalf.
- If you are an invited company contact, it is imperative that you create your login from the link contained in the e-mail invitation. Do NOT go directly to peelregion.bidsandtenders.ca website and create a separate Bidder account.

8. **CONTRACT AWARD**

The Agency reserves the right to award one overall contract that includes all three locations to one Vendor in accordance with its requirements. Prior to award, the Agency reserves the right to perform a site visit at the Bidder's facilities for the purpose of evaluating the Bidder Submission.

Without limiting, and in addition to all other rights to which the Agency is entitled pursuant to this Document, the Agency shall be entitled to fully evaluate the Bidder Submission, which evaluation may include, without limitation, a review of references provided by the Bidder and of those that may be obtained by the Agency independently, past performance history of contracts between the Bidder and the Agency and/or between the Bidder and third parties, past completion history (including completion of full contract term, late or extended completion of contract and late delivery of goods or services), litigation and claims history of the Bidder (including previous, existing or potential litigation with the Agency or others and construction liens filed by the Bidder or subcontractors), delivery of incorrect services, customer service and responsiveness, or history of bidding unrealistic pricing, any of which may result in higher ultimate costs or other difficulties for the Agency, and to reject a Bidder Submission if the same is, in the Agency's sole opinion, unsatisfactory, or would not provide the best value to the Agency.

9. **QUANTITIES**

Quantities in the Document are approximate only and are based on information available to the Agency at the time of tendering. Final quantities for payment of tender items supplied on a unit price basis shall be based on actual field measurements as determined by the Agency.

10. **BID PRICING CHANGES**

The legislation and regulations governing the workplace in Ontario, including, without limitation, the Canadian Income Tax Act, the Canadian Immigration and Refugee Protection Act, Ontario Employment Standards Act, 2000, Employer Health Tax Act, Labour Relations Act, 1995, Occupational Health and Safety Act and Workplace Safety and Insurance Act, 1997 may change at any time and may impact upon Bidders' pricing and overhead costs. In submitting its Submission, each Bidder hereby acknowledges that it has considered any proposed changes to legislation and regulations, and any impact such changes, if any, may have on its pricing. Bidders are advised that the Agency will not entertain requests to change submitted bid prices for this Document based on changes to the minimum wage or other legislative or regulatory amendments made under any statute. It is each Bidder's obligation to operate according to all applicable law at all times. For clarity, each Bidder takes on all risk and responsibility for cost increases due to legislative and regulatory changes. For further clarity, each Bidder takes on all risks due to health, environmental, social, emergency or other factors which may arise and which may result in unforeseen or otherwise uncalculated costs or legal circumstances to the Bidder in order to complete the Work, to keep its workers or the public safe according to applicable law and

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government order, or to address other intervening circumstances. The Bidder is required to arrange its own contractual and subcontractor obligations for labour, materials or other matters related to this contract so as to minimize or eliminate extra costs or circumstances which may jeopardize its ability to fulfill its contractual obligations to the Agency under this Document or Contract award.

In light of the 2020 COVID-19 pandemic, the Contract Price shall include all costs on the assumption that the COVID-19 pandemic emergency regulations or other orders of a government or public authority or public health authority related thereto are in force to the completion of the Work.

11. **TIME OF COMPLETION**

The Contractor shall diligently complete the Work in accordance with the time of completion set out in 11.1 below. **The date of substantial performance shall not extend beyond the time provided below after the written order for commencement of the Works by the Owner.**

If this time limit is not sufficient to permit completion of the Work by the Contractor within the Working Hours, the Contractor shall add and/or augment the Working Hours throughout the life of the Contract to the extent necessary to ensure that the Work will be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions will be considered to be included in the prices bid for the various items of Work and no additional compensation will be allowed.

Any extension of working hours beyond those specified in this contract will require written authorization of the Owner.

11.1 The Contractor agrees to have the Works “Substantially Performed” in accordance with this document within **30 weeks** after written order for commencement of the Work by the Owner.

The Contractor agrees that they will deliver the whole of the Works completed in accordance with this document within **32 weeks** after written order for commencement of the Work by the owner.

12. **DIGITAL BID BOND**

To be considered, the Bidder’s Submission must include a digitally created and electronically delivered bid bond in the form of bond included in **Appendix 8.8** herein, naming the Agency as Obligee, in the amount of **\$200,000**.

The bond must be issued by a surety company licensed to issue surety bonds in the Province of Ontario.

The bond must be delivered by means of a service or application recognized as meeting in whole or in part the Surety Association of Canada’s mandatory

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requirements for e-bonding solutions. Photocopies, images or scanned facsimiles will not be accepted.

It is to be noted that the digital bid bonds of all Bidders will not necessarily be verified by the Agency. Prior to award of the Contract, the Agency will verify the digital bid bond of the Bidder who is proposed to be awarded the Contract by the Agency. Where the digital bid bond is not verifiable, the bid will be deemed non-compliant and disqualified. In such a case, the Agency will proceed to verify the digital bid bond of the next Bidder proposed to be awarded the Contract, and continue the process as necessary, until a digital bond is verified by a fully compliant Bidder whose bid is proposed to be awarded the Contract by the Agency.

If a digital bid bond and an Agreement to Bond are requested by the Agency and the surety company only provides the Bidder with a merged version, the Bidder is required to upload the merged document in both applicable fields of the online Bidding System forms.

The digital bid bond of the Bidder whose submission is accepted shall be called upon should the Bidder fail to execute a Contract and provide the necessary documents as required within this Document (such as a satisfactory bond, insurance certificate, Workplace Safety and Insurance Board letter of clearance) within seven days after receiving written notice from the Agency of the award of the Contract to the Bidder.

13. **AGREEMENT AND AGREEMENT TO BOND**

Following award, the Vendor shall be required to execute an agreement with the Agency on the terms of the CCDC2 Stipulated Price Contract 2008, as amended by the Agency's Supplementary Conditions as contained herein.

In order to be considered for award, the Bidder shall submit through the Bidding System as part of their Bidder Submission, an Agreement to Bond in the form attached in **Appendix 8.1**, completed by a Bonding Company permitted to issue performance bonds and labour and material payment bonds in Ontario and with an A.M. Best rating of B+ or better. Any others will not be accepted. Each Bidder must submit the completed Agreement to Bond as part of their Bidder Submission in order to validate their Bidder Submission.

If a digital bid bond and an Agreement to Bond are requested by the Agency and the surety company only provides the Bidder with a merged version, the Bidder is required to upload the merged document in both applicable fields of the online Bidding System forms.

Upon receipt of written notice from the Agency that it has been awarded the Contract, the successful Bidder shall provide, within seven days of such notice, a Performance Bond and a Labour and Material Payment Bond, each for the amount of **50 per cent** of the total lump sum price, substantially in the forms

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required under the *Construction Act*, to guarantee the performance of all obligations of the Contract.

If applicable, the parties agree that the execution of the form of agreement may be facilitated through facsimile or electronic means and/or this agreement may be executed in several counterparts and any such facsimile or electronic copy and any such counterpart shall be deemed to be an original agreement, and such facsimile or electronic copies or such counterparts together shall constitute one and the same agreement and shall have the same force and effect as an executed original.

If applicable, the parties agree that the execution of the form of agreement by either party may be facilitated through an electronic approvals process (the "Approval Process") whereby an e-mail confirmation is provided by the signing party to the other party to evidence the execution of the agreement and binds the individual/corporation, which e-mail confirmation shall be attached to this agreement and shall have the same force and effect as an executed original. Each of the parties shall maintain a record of such electronic documents pursuant to this Approval Process and shall provide an executed copy of the agreement to the other party with a wet signature, within a reasonable time following the termination of the Declaration of Emergency by the Province of Ontario in relation to the COVID-19 pandemic (the "Declaration"). This Approval Process shall apply only to the extent that this agreement is executed during the period in which the Declaration is in effect.

The Approval Process involves one party sending an email confirmation to the other party in the following format, as applicable:

In the case of the Vendor:

<INSERT COUNTERPART NAME>

APPROVAL DATE: MM DD YYYY

I, <Full Name and Title> confirm that I have the authorization of <Insert Counterpart Name> to enter into the attached <Agreement/Contract Name> on behalf of <Insert Counterpart Name> with The Regional Municipality of Peel. The <Insert Counterpart Name> agrees to the terms and conditions set out in the attached <Agreement/Contract Name>. I, <Full Name and Title> agree to sign all original documents with wet signatures once the declaration of emergency is terminated. I, <Full Name and Title> have the authority to bind the corporation.

In the case of the Agency/Region:

THE REGIONAL MUNICIPALITY OF PEEL (or as applicable, with suitable changes)

APPROVAL DATE: MM DD YYYY

I, <Full Name and Title> confirm that I have the authorization of Regional Council of The Regional Municipality of Peel to enter into the attached <Agreement/Contract Name> on behalf of The Regional Municipality of Peel

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pursuant to <Insert Resolution or By-law Number when applicable for Non-Routine documents> and Document Execution By-law32-2017 as amended by By-law 6-2020. The Regional Municipality of Peel agrees to the terms and conditions set out in the attached <Agreement/Contract Name>. I, <Full Name and Title> agree to sign all original documents with wet signatures once the declaration of emergency is terminated. I, <Full Name and Title> have the authority to bind the corporation.

14. **INSURANCE**

The insurance shall be maintained continuously from the commencement of the work until the end of warranty period established within these contract documents following the date of the completion Certificate.

The Agency's Certificate of Insurance shall be completely filled in with the required information. No other form shall be accepted.

A deductible clause is only acceptable if the Contractor submits a signed and sealed letter stating the following:

"We (insert Contractor's name) authorize the Region of Peel to appoint an independent adjuster to settle any claims arising from this Contract which are for amounts less than our insurance deductible figure. Furthermore, the Region can deduct any amounts of justifiable claims from monies owing to the Contractor."

15. **VENDOR AS CONSTRUCTOR**

The Vendor acknowledges that, if the Agency does not enter into any other contracts for the project, the Vendor is the "constructor" and the "employer" within the meaning of the *Occupational Health and Safety Act* (Ontario) and the Vendor undertakes to carry out the duties, obligations and responsibilities of the constructor and the employer with respect to the project. Obligations include but are not limited to making necessary response and change to operations required by any level of government pursuant to applicable law, regulation or special emergency order in the event of any health, environmental, social, emergency or other risk, including but not limited to response to municipal, provincial or federal orders related to the COVID-19 pandemic **which are in place as of the date of closing of this Document. If the Agency assesses that the Vendor has not made sufficient response and change to operations to be in compliance with applicable law related to same**, the Agency may, as a contractual obligation under this Document or Contract award, require additional Work modifications or arrangements as part of the appropriate response by the Contractor to public health, occupational health and safety or construction safety or to the above-noted risks or other emergency circumstances, which the Contractors shall accommodate at no extra cost to the Agency in order to protect its workers, the public or the Agency's staff. **In addition, the Agency may choose to set up a contingency allowance to draw from during the applicability of government orders or regulation related to public health, occupational health and safety or construction safety measures to deal**

with health, environmental, social, emergency or other extraordinary risks, meant to address future government orders or regulations which are not in place as of the date of closing of this Document but which arise in the course of the Work. For any change order related to the above circumstances, the Vendor shall submit details and supporting documents of extra costs and agrees to charge actual costs on a zero mark-up basis.

In this project, the Agency may have cause to enter into more than one contract for the project. Additionally, there may be instances where the Agency's staff are required to attend the project site for specified intervals to perform work associated with the project. In such cases, the Vendor is required and agrees to fulfill all of the duties, obligations and responsibilities of the "constructor" and "employer" with respect to the project and on behalf of the owner, in accordance with the terms and conditions set out in **SC 15** of the Supplementary General Conditions, and the Guidelines set out in GUIDELINES FOR THE CONTRACTOR WHERE OWNER'S STAFF AND OTHER CONTRACTORS ARE REQUIRED TO PERFORM WORK ON THE PROJECT SITE below.

16. **GUIDELINES FOR THE CONTRACTOR WHERE OWNER'S STAFF AND OTHER CONTRACTORS ARE REQUIRED TO PERFORM WORK ON THE PROJECT SITE**

Requirements for the Contractor where other vendors/contractors or the Owner's staff/other contractors are required to attend the Project site to perform Work associated with the Project are as follows.

The Contractor shall:

- (a) Assume and fulfill the responsibility of constructor for all Owner's staff/other contractors attending the project site to conduct required Work.
- (b) Provide orientation to Owner's staff/other contractors prior to Work commencement at the site.
- (c) Identify a site supervisor contact or assistant for all Owner's staff/other contractors.
- (d) Maintain a sign in/out log of all visitors to the site, including Owner's staff/other contractors.
- (e) Maintain a signed copy of the Owner's Staff/Other Contractors Project Constructor Coordination Form (Appendix 5.6) for any Owner's staff/other contractors on site, in which all such persons working on the site shall provide a signed acknowledgement that they will comply with the Contractor's safety program and safety instructions.
- (f) In order to avoid delays, provide sufficient notice and coordinate Owner's staff/other contractors' work so it does not impact or conflict with any other work happening at the site.
- (g) Schedule Owner's staff/other contractors' work as close as possible to substantial completion to avoid the majority of construction hazards and risk to Owner's staff/other contractors.
- (h) Maintain a log of all Form 1000 provided by each employer on site.

17. **VENDOR PERFORMANCE EVALUATIONS**

The Agency will utilize its Contractor Performance Evaluation Form as per the Performance Evaluations Procedure F35-27 (the "Procedure") to provide a written evaluation and record of the successful Bidder's/ Contractor's performance on this Contract. Evaluation on Contractor performance under this Contract will be used to provide feedback to the Vendor for performance improvements and/or to acknowledge satisfactory performance, to determine the Bidder's eligibility or ineligibility to bid on future Agency Contracts and to justify award or non-award of future Contracts.

The complete Procedure, guidelines and Contractor Performance Evaluation Form can be found on the Agency's website at peelregion.ca/procurement, "Vendor Performance Evaluations".

This Procedure and all related information may be amended from time to time and the most up-to-date version shall form part of this Contract. Bidders shall be aware that, if they are awarded this Contract, they shall be evaluated on the basis of the Procedure.

18. **SUBCONTRACTORS**

The Bidder shall provide in the Bidder Submission the name and address of each of its proposed subcontractors to be utilized in this project.

Attention is drawn to Section GC 3.7 of the General Conditions, Section SC.20 of the Supplementary Conditions and to the instructions on the List of Suppliers and Subcontractors in the online Bidding System forms.

It is the responsibility of Bidders to ensure any subcontractors they retain are in good standing with the Agency under the Procedure and meet all requirements of this Document and are thus eligible to perform work on Agency contracts. Prior to bidding on this Document, Bidders shall contact the Agency at 905-791-7800 ext. 7538 to obtain a list of Contractors suspended from performing work on any Agency contracts as a subcontractor. Should a Bidder name any subcontractor in its Bidder Submission that is suspended as a subcontractor under the Procedure, the Bidder shall be required to name a replacement satisfactory to the Agency, acting reasonably, at no additional cost to the Agency, failing which the Bidder shall be deemed non-compliant and not given consideration for Contract award. By submitting a Bidder Submission, the Bidder accepts that the Agency has no liability to the Bidder or any subcontractor or third party related to the rejection of a subcontractor who is ineligible to be considered, or otherwise unsatisfactory to the Agency.

The Contractor shall arrange that each of the Contractor's Owner-approved Subcontractors whose subcontracts have a value of **\$200,000** or greater, together with surety companies approved by the Owner, shall furnish to the Contractor a Performance Bond and a separate Labour and Material Payment Bond each in the amount of **50 per cent** of the total value of the respective

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subcontract. The Performance Bond and the Labour and Material Payment Bond are to be substantially in the forms prescribed under the *Construction Act*, each adjusted only to reflect that it is to be obtained by the applicable Subcontractor instead of the Contractor. The Owner will not reimburse the Contractor separately for the cost of the bonds, therefore the Subcontractor should allow for the cost in the subcontractor's lump sum price.

The Owner will not require completed Agreement to Bond forms for the subcontractors' bonds mentioned above to be submitted by the Bidder at the time of tendering. The Bidder may decide, at the Bidder's discretion, to obtain Agreements to Bond from the Bidder's subcontractors at the time of tendering.

19. **BIDDER SUBMISSION**

- (a) The Bidder Submission must be submitted electronically using the Bidding System.
- (b) A person or persons with authority to bind the Bidder must electronically declare on the online Bidding System that their Bidder Submission has been made entirely in accordance with the Document.
- (c) All pricing in the Bidder Submission must be expressed in figures, and must be in Canadian Dollars.
- (d) Prices in the Bidder Submission must include all costs necessary to complete the Work in accordance with the Document including customs and duties.
- (e) The Bidder represents, warrants and confirms that no oral or written alterations or variations in the Document and/or Contract have been made by the Bidder and none shall be valid or binding upon the Agency unless authorized by the Agency in writing.
- (f) Bidder Submissions which are qualified or subject to any conditions, limitations or restrictions shall be rejected by the Agency.
- (g) The Bidder acknowledges that it is solely responsible for obtaining and reviewing all Contract documents and all addenda issued by the Agency pertaining to the Document.

Only Bidders that are registered as a Plan Taker for this Document with Bids and Tenders at peelregion.bidsandtenders.ca and have obtained this Document from Bids and Tenders or the Agency, may submit a Bidder Submission.

Should the Agency receive a Bidder Submission that is subsequently found to be from a Bidder that is not a registered Plan Taker with Bids and Tenders at peelregion.bidsandtenders.ca, and the Bidder did not obtain the Document from Bids and Tenders or the Agency, the Agency reserves the right to reject the Bidder Submission as non-compliant and give it no further consideration for contract award.

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20. **AGENCY RIGHTS**

The Agency reserves the right, in its sole and absolute discretion to:

- (a) deem a Bidder Submission to be unbalanced and may reject any and all Bidder Submissions, which it so deems, and for this purpose, “unbalanced” shall include, without limitation, a Bidder Submission which does not reflect a realistic breakdown of the costs of each or any portion of the Work;
- (b) adjust the totals in a Bidder Submission where there are errors in extensions, additions or computations. In such cases, the unit prices shown shall govern;
- (c) reject any or all Bidder Submissions, accept a Bidder Submission which is not the lowest price, reject a Bidder Submission even if it is the only one received by the Agency; and cancel or suspend or delay this request for Bidder Submissions at any time either before or after the receipt of Bidder Submissions, following which the Agency may proceed as it determines in its sole discretion, including without limitation, negotiating with any one or more of the Bidders or any other person or entity for the performance of the Work under such terms and conditions as the Agency may decide in its sole discretion, or issuing a new request for Bidder Submissions on the same or modified terms, all without liability to itself;
- (d) if making an award of the Contract in its entirety or in part, to one or more Vendors, make changes to the content of the Contract to address unforeseen circumstances which may have arisen during the bidding period, including but not limited to health, environmental, social or emergency events including but not limited to the Covid-19 pandemic, which require responses to ensure the health and safety of workers, the health of the public and of Agency staff, and the efficacy of the project are maintained at all times, if in doing so the best interests of the Agency will be served, and the Agency will assess the expected costs of such changes and make a contingency allowance for same, which the Vendor may claim costs against on a zero mark-up basis upon proof sufficient to the Agency, unless such changes are expected to be able to be accommodated by the Vendor without change to the Contract Price;
- (e) inspect and have a demonstration of the goods and/or services offered prior to award of a Contract and request evidence of experience, ability or financial standing;
- (f) waive formalities, technical defects, irregularities and omissions in a Bidder Submission, and may accept a Bidder Submission which does not comply with the formal requirements of the Document, if in doing so the best interests of the Agency will be served;
- (g) remove from the Agency’s list of vendors the name of any vendor and/or Bidder for failure to accept a contract or for unsatisfactory performance or non-performance of a contract;
- (h) fully evaluate the Bidder Submission, which evaluation may include, without limitation, a review of references provided by the Bidder and of those that may be obtained by the Agency independently, past performance history of contracts between the Bidder and the Agency

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- and/or between the Bidder and third parties, past completion history (including completion of full contract term, late or extended completion of contract and late delivery of goods or services), litigation and claims history of the Bidder (including previous, existing or potential litigation with the Agency or others and construction liens filed by the Bidder or subcontractors), delivery of incorrect services, customer service and responsiveness, or history of bidding unrealistic pricing, any of which may result in higher ultimate costs or other difficulties for the Agency, and to reject a Bidder Submission if the same is, in the Agency's sole opinion, unsatisfactory, or would not provide the best value to the Agency;
- (i) reject and disqualify any or all Bidder Submissions based on a Bidder's Vendor Performance Rating, status and standing as per the Agency's Vendor Performance Evaluations procedures, as amended from time to time; and
 - (j) seek further information and/or clarification, including without limitation a detailed price breakdown, from any Bidder after the closing time, for the purposes of assisting the Agency in interpreting and evaluating any Bidder Submission and in interpreting any inconsistencies which may appear in any Bidder Submission, and the Agency shall have the right to consider and rely on such further information and clarifications in evaluating the Bidder Submissions and awarding the Contract; and,
 - (k) either before, after or as a change to the terms of the Contract award, to temporarily suspend or to alter the timelines of the Contract delivery schedule or any other terms of the Contract in its sole discretion, in response to circumstances beyond the Agency's control or legislative changes or orders of a government, related to health (such as public health, occupational health and safety or construction safety), environmental, social or other emergent or unforeseen circumstances such as the Covid-19 pandemic.

21. **CONFIDENTIAL INFORMATION/OWNERSHIP AND DISCLOSURE OF BIDDER SUBMISSIONS**

- (a) The Vendor agrees to protect and maintain the confidentiality of all personal or other information, including all personal health information, that the Vendor accesses or of which the Vendor acquires knowledge of as a result of the services in this Contract, and agrees to use, collect, disclose, retain, protect and dispose of the personal (health) information only in accordance with all privacy legislation applicable to the Agency where it is acting on behalf of the Agency. Disclosure of any information shall be done only with the Agency's prior written consent. The provisions of the indemnity clause in this Contract apply to any breach of privacy or confidentiality in this clause. The Vendor shall ensure that its directors, officers, employees, agents, subcontractors and anyone else for whom it is responsible in law all adhere to the requirements of this section regarding privacy and confidentiality.
- (b) The Agency, and the Agency's responsibilities under this Contract, are subject to all applicable privacy legislation including the Municipal

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Freedom of Information and Protection of Privacy Act, R.S.O. 1990 c.M.56, as amended (“MFIPPA”) and/or the Personal Health Information Protection Act, 2004 (“PHIPA”) with respect to the collection, use, disclosure, retention and protection of confidential, sensitive or personal (health) information under the Agency’s custody and control. Under an MFIPPA request, all documents provided to the Agency by the Vendor pursuant to the procurement process which led to this Contract, and the Contract itself and associated documents, may be required by law to be made available to a requesting member of the public, with the possible exception that the party submitting certain information requests that it be treated as confidential and that there is an appropriate exemption to disclosure in MFIPPA, or a non-disclosure requirement in either MFIPPA or PHIPA.

- (c) The Bidder Submissions, along with all correspondence, documentation and information provided to the Agency by any Bidder in connection with or arising out of the Bidder Submission, once received by the Agency, shall become the property of the Agency and may be appended to any agreement and/or purchase order with the successful Bidder. Bidders must identify in their Bidder Submissions any scientific, technical, proprietary, commercial or other confidential information, the disclosure of which could cause them injury.
- (d) In public bids, the name of each Bidder and the lump sum price contained in their Bidder Submission shall be published on the Bidding System.
- (e) Where award is to be made by Regional Council, the Peel Police Services Board or the Board of Directors of Peel Housing Corporation, information regarding all Bidder Submissions, including names of each Bidder, lump sum prices and the annual or overall value of the Contract and/or Bidder Submissions shall be included in public reports to Regional Council or the relevant Boards such that the information is released publicly. The Bidder acknowledges that the Agency cannot guarantee it can honour requests to keep Bidder information confidential in light of applicable law requirements, and also in light of the need for transparency and public disclosure where release of Bidder information in public Council reports related to a specific project or procurement process is necessary.

22. COLLUSION AND CONFLICT OF INTEREST

- (a) By submitting a Bidder Submission, each Bidder represents and warrants that no member, officer or employee of the Agency or Council has or will have an interest, directly or indirectly, in the performance of the Contract, or in the supplies, work or business in connection with the said Contract, or in any portion of the profits thereof, or in any monies to be derived therefrom; the Bidder Submission is not made in collusion with any other Bidder making a Bidder Submission for the same goods and services and is, in all respects, fair and without fraud; and that neither it nor any of its subcontractors nor any of their respective representatives has any actual, apparent or potential conflict of interest or existing business or other

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relationship with the Agency or any or any other party or person providing advice or services to the Agency with respect to the Document or the Work or any of their respective representatives that gives rise or might give rise to an unfair advantage (a "Conflict of Interest"). Each Bidder acknowledges that it is within the Agency's discretion to determine whether a Conflict of Interest exists.

- (b) Should the Bidder give or offer any gratuity to or attempt to bribe any member of the Agency, or to commit collusion or fraud, the Agency shall be at liberty to reject the Bidder Submission or, if a Contract has been awarded, terminate the Contract forthwith, without liability to itself, and to rely upon the sureties as provided for.
 - (c) By submitting a Bidder Submission for this Document, each Bidder thereby releases and forever discharges the Agency from any and all liability related to any determination the Agency may make regarding Conflicts of Interest, including any disqualification, prohibition, rejection or contract termination which may result therefrom.
 - (d) In addition to all other rights in this Document or otherwise available at law or in equity, the Agency may, in its discretion, immediately disqualify a Bidder Submission or may terminate any contract entered into in connection with or resulting from the Document, without liability, penalty or cost, upon giving notice to the Bidder if the Bidder or any of their respective representatives fails to disclose or has failed to disclose any Conflict of Interest.
23. **HARMONIZED SALES TAX (HST) INFORMATION**
- The Agency is subject to the payment of provincial and federal taxes imposed by the Provincial and Federal Governments and, if required, the collection of any withholding tax for non-resident Vendors. All prices within this Document shall be quoted exclusive of HST.

24. **ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES**
- The Vendor shall comply with the *Accessibility for Ontarians with Disabilities Act* 2005, and its Regulations thereunder with regard to the provision of goods or services to persons with disabilities. The Vendor acknowledges that pursuant to the *Accessibility for Ontarians with Disabilities Act* 2005, the Region of Peel must, in deciding to purchase goods or services through its procurement process, consider accessibility for persons with disabilities to such goods or services. This legislation can be accessed through the following link to the Government of Ontario's website: ontario.ca/laws/statute/05a11. You may also access this link at peelregion.ca/procurement, "Additional Information for Bidders" and view the accessibility standards.

25. **INVOICING AND ELECTRONIC PAYMENT INSTRUCTIONS**
- 25.1 **All invoices must be sent to the individual ordering the goods/ services or as directed at the time of the order placement. Failure to do so will result in a delay of payment.**

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- 25.2 The Agency's method of payment is by Electronic Funds Transfer (EFT). The Vendor will be required to provide the Agency with the Application for Vendor Direct Deposit form containing original signatures in ink, by return mail, fax or hand delivered, the following banking information:
- 25.2.1 Names of two Company Officers, their titles, e-mail addresses, fax numbers, and phone numbers. Note: Both Company Officers must sign off on any subsequent changes to the Vendor's banking information.
- 25.2.2 Company mailing and remittance addresses.
- 25.2.3 Banking information including a void cheque.
- 25.2.4 The Vendor is required to notify the Agency of any changes to this information immediately.
26. **COVID-19 OR OTHER EMERGENCY RESPONSE REQUIREMENTS**
- 26.1 In addition to the Contractor's obligations to follow all applicable law pursuant to s. 1.4 in A-1 and s. 10.2.3, including but not limited to that applicable to public health, occupational health and safety and to construction safety, the parties acknowledge that there may arise circumstances, such as the Covid-19 pandemic, where they intend to cooperate in good faith with each other to resolve concerns which may arise related to health, environmental, social or other emergency circumstances, so as to continue the Work and to avoid any increases in Contract Price or delay in progress of the Work **wherever possible**.
- 26.2 The parties acknowledge the Delay terms in s. 6.5.3 related to causes beyond the Contractor's control. **There may be circumstances which arise after Contract Award, and relate to any contingency allowance which the Region may have put in place or which a party believes extend beyond or in addition to such contingency allowance terms, but which do not meet those circumstances in s. 6.5.3 and which the parties wish to discuss. Such topics may include** the following non-exhaustive list:
- .1 stop Work;
 - .2 suspend Work;
 - .3 change Work;
 - .4 change Substantial Performance Date or Contract Completion;
 - .5 change critical path of Construction Schedule;
 - .6 change subcontractors or suppliers per GC 3.7,
- the parties agree to
- .7 use s. 8.2.3 to conduct amicable discussions or negotiations;
 - .8 to work within Part 6 wherever possible to agree upon any changes;
 - .9 to work together notwithstanding s. 6.3.3 where needed; and,

- .10 the parties agree that in such circumstances, s. 7.2.2 delay prior to termination by the Contractor shall be extended to 120 days or longer.
- 26.3 This section is to be distinguished from s. 10.2.7 as it is acknowledged that the circumstances for discussion in this regard relate to situations where health, environmental, social or emergency needs or government regulation related to same may dictate the Contractor's response to, within the terms of the Contract, request changes which will not result in a change to Contract Price if they are discussed early and promptly **or where a change to Contract Price may be agreed between the parties on a zero mark-up basis, and** where it is the preference of both parties that the Work continue, even though subject to differing or extra health or safety obligations.
- 26.4 In such discussions or negotiations, the following is applicable:
- 26.4.1 changes in the Work would preferably be made by agreement
- 26.4.2 if changes are requested by the Contractor, there shall be no extra cost to the Owner **or costs on a zero mark-up basis as may be agreed upon with the Owner**
- 26.4.3 if changes are requested by the Owner, there shall be no extra cost to the Owner unless the Contractor provides records as may be necessary to support a claim **on a zero-mark-up basis to which the Owner could agree.**

1. EVALUATION COMMITTEE

Bidder Submissions will be evaluated by an evaluation committee comprised of Regional staff members through consensus evaluation meetings. Failure to provide a response to any of the requested information may deem the submission non-responsive and subsequently no points will be assigned during the evaluation process. Information submitted is subject to verification, and further pertinent information may be obtained from references. Reference checks by the Agency may not be limited to those listed in the Respondent’s Submission.

By responding to this Document, Bidders agree to accept the decision of the evaluation committee as final. Bidders are required to submit their Technical and Pricing Proposals in the Online Bidding System Forms.

2. EVALUATION METHODOLOGY

This Document will be evaluated in two phases:

Phase I - Request for Information - Pre-qualification of Bidders

Phase I requires that Bidders provide information on their company and related experience in providing comprehensive and relevant construction services for Commercial and Institutional (ICI) projects. Based on the information received, an evaluation committee will evaluate all responses. Those deemed, at the sole discretion of the evaluation committee, best qualified will enter into Phase II.

Phase II - Pricing Evaluation

Only those Bidders who have been deemed best qualified in Phase I will enter into Phase II and the separate pricing file of the Bidder Submission evaluated as part of Phase II and for Contract award.

3. EVALUATION CRITERIA PROCESS

Bidder Submissions will be evaluated by an evaluation committee based on the categories below. The disclosure of the allocated weightings for each category is provided to assist Bidders in preparing a proposal that best meets the requirements of the Agency.

Category	Weighting
Company Profile	5 per cent
1.3.1 Explain in detail your Organization’s philosophy, background and areas of expertise.	1
1.3.2 Provide details of your firm’s Quality Management program.	2
1.3.3 Provide details of your firm’s Health and Safety program.	1
1.3.4 Provide information on the annual value of work for years 2010 to 2019.	1

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Experience Leading Similar Projects	15 per cent
1.4.1 List and provide a description of three recently completed projects within the years 2010 to 2019 which demonstrate the relevant capabilities of your firm in providing construction services for Commercial and Institutional (ICI) projects. Project One	5
1.4.1 List and provide a description of three recently completed projects within the years 2010 to 2019 which demonstrate the relevant capabilities of your firm in providing construction services for Commercial and Institutional (ICI) projects. Project Two	5
1.4.1 List and provide a description of three recently completed projects within the years 2010 to 2019 which demonstrate the relevant capabilities of your firm in providing construction services for Commercial and Institutional (ICI) projects. Project Three	5
Project Team and Experience	20 per cent
1.5.1 Propose your Team as referenced in Section 2 - Contractors Team.	10
1.5.2 Provide an organization chart identifying all Key Personnel to be assigned and show the reporting relationships among these individuals.	2
1.5.3 Provide Project manager and Site superintendents curricula vita .	3
1.5.4 Identify Subtrade Experience .1 As referenced in section 2, please provide project references for the following subtrades: .1 Flooring .2 Doors .3 Millwork	5
Proposed Workplan	20 per cent
1.6.1 Provide proposed work plan to demonstrate the Critical Stages / Milestones	15
1.6.5 Provide a schedule detailed to the subtrades activities (Level 4 Gantt chart or other graphic schedule) that demonstrate your understanding of the project and in accordance with key milestones	5
Price	40 per cent

By responding to this Document, Bidders agree to accept the decision of the evaluation committee as final.

4. PRICING – MANDATORY REQUIREMENT

Pricing information will be entered by Bidders in the pricing tables provided in the Bidding System and included with the Bidder submission in order for the Bidder

submission to be considered. Upon completion of the technical evaluation stage, only those Bidder Submissions that are deemed to meet the needs of the Agency will move on to the pricing evaluation stage and have their submitted pricing considered as the final phase of this call.

Important: The intent of the two-phase evaluation process is to ensure that Bidder Submissions are evaluated initially on the basis of the Agency's criteria only, without regard to pricing. If Bidders attempt to indicate pricing outside of the process indicated above, the Bidder shall, at the Agency's sole discretion, be deemed non-compliant and given no further consideration.

1. **BACKGROUND**

1.1 **Introduction**

- 1.1.1 The Regional of Peel operates five long term care homes in three regional communities of Brampton (2), Mississauga (3) and Bolton (1). These facilities, which are governed under the Ontario Long-Term Homes Act, 2007 and Regulations 79/10, provide long-term residential accommodation and related home restorative personal care (recreational and social activities, medical care, and dietary services and nutrition care, and support for religious and spiritual practices) to elderly residents. These services promote independence, health and well-being, and improved quality of life.
- 1.1.2 The Agency is looking to retain an experience construction firm (hereinafter referred to as the Contractor) for performing localized interior renovations at three long term care (LTC) facilities located within the region of Peel.
- 1.1.3 The Project is to be delivered through the CCDC 2-2008 Stipulated Price Contract as modified by the Agency's Supplementary Terms and Conditions.
- 1.1.4 The facilities will remain occupied and operational during the performance of the work.
- 1.1.5 A dedicated Site Superintendent must be provided for each project site and must have a current certificate of training in infection control as mandated and defined by CSA-Z317.13-17.

1.2 **Locations**

- 1.2.1 Malton Village LTC: a three-storey Long Term Care Facility located at 7075 Rexwood Drive in Mississauga. The 160-bed facility was constructed in 2003.
- 1.2.2 Tall Pines LTC: a three-storey Long Term Care Facility located at 1001 Peter Robertson Boulevard in Brampton. The 160-bed facility was constructed in 2003.
- 1.2.3 Sheridan Villa LTC: a four-storey Long Term Care Facility located at 2460 Truscott Drive in Mississauga. The 142-bed facility was constructed in 1971 and renovated in 2010.

1.3 **Scope of Work Summary**

- 1.3.1 Detailed scope of work, drawings and specifications can be reference in Appendix 8.2.
- 1.3.2 Site – Malton Village LTC
 - .1 Scope 1: Replacement of closet doors, and maintenance of washroom doors in all resident's rooms.
 - .2 Scope 2: Renovation of the second floor Staff Room, including relocation of the Computer Room and kitchenette.
 - .1 Removal of existing rubber flooring, new sheet vinyl flooring, partial ceiling demolition, new ceiling,

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- painting and all associated mechanical and electrical work.
- .2 New kitchenette millwork and all mechanical and electrical work.
- .3 Relocation of existing rain water leader.
- .3 Scope 3: Kitchen Flooring Replacement
 - .1 Removal of all existing flooring at basement kitchen and ancillary rooms. Sheet vinyl except at compressor room (epoxy), dishwashing area (epoxy), office (rubber).
 - .2 New polyurethane flooring and drain caps at basement kitchen, dishwashing area and auxiliary rooms (refrigerators, office, janitor, compressor room and storage rooms), including replacement of one kettle, stainless-steel exhaust trim and new hand sink.
 - .3 Provide temporary kitchen facilities, including kitchen, fridge and freezer trailers rentals, modifications, certification, delivery, setup, temporary power and water connections for the temporary kitchen trailers and coordination.
 - .4 Temporary stairs and scaffolding deck, ramp and covered walkway at temporary kitchen facilities.
- .4 Scope 4 Exit Ramps
 - .1 Sidewalks at five (5) exits to be partially removed and replaced with new sidewalks, complete with curbs, handrails and frost protection to provide barrier-free access.
- 1.3.3 Site – Tall Pines LTC
 - .1 Scope 5: Door Repairs at Tall Pines LTC
Replacement of closet doors, and maintenance of washroom doors in all resident’s rooms at Tall Pines.
 - .2 Scope 6: Epoxy and Polyurethane Flooring at Tall Pines
Scope Includes:
 - .1 New waterproof polyurethane flooring and drain caps at the Mechanical Room, Penthouse Mechanical and Chiller Room, including associated mechanical and electrical work.
 - .2 Removal of existing epoxy flooring.
- 1.3.4 Site – Sheridan Villa LTC
 - .1 Scope 7: Serveries Flooring at Sheridan Villa
Scope Includes:
 - .1 New epoxy flooring with waterproof membrane and new drain caps, decommissioning of the existing dishwasher, including sink table and

exhaust hood, new exhaust and optional electrical outlet.

- .2 Removal of existing sheet vinyl flooring.
- .3 Scope to include the disconnection, removal, cleaning, storage, reinstatement and reconnection of all kitchen equipment and millwork.

1.4 **Critical Stages / Milestones**

1.4.1 For the Purposes of this Contract, the Contractor shall assume a Contract start date of August 12, 2020 and consider this date in the development of the Contractor's proposed work plan.

1.4.2 Critical Milestones include but are not limited to the following:

- .1 Contract commences by August 12th, 2020.
- .2 Substantial Completion of all Scopes June 1, 2021.
- .3 Scope 1 Door Repairs at Malton Village
 - .1 To be done from mid-January 2021 to April 2021.
- .4 Scope 2 Staff Room at Malton Village
 - .1 To be done from mid-January 2021 to April 2021.
- .5 Scope 3 Kitchen Flooring at Malton Village
 - .1 Site construction activities start May 1st, 2021. All necessary preparation to be done ahead of time.
 - .2 Substantial completion and Turn over to Operation not later than June 3rd, 2021.
- .6 Scope 4 Exit Ramps at Malton Village
 - .1 To be done in Fall 2020.
- .7 Scope 5 Door Repairs at Tall Pines
 - .1 To be done from mid-January 2021 to April 2021.
- .8 Scope 6 Epoxy Floor at Tall Pines
 - .1 To be done from mid-January 2021 to April 2021.
- .9 Scope 7 Serveries Floor at Sheridan Villa
 - .1 To be done from mid-January 2021 to April 2021.
- .10 Final Completion of all Scopes not later than, June 15, 2021.

1.5 **Meetings**

1.5.1 The contractor will allow for the following meetings during the project.

- .1 One Pre-construction meeting at each site
- .2 Bi-weekly construction meetings at each site
- .3 Meetings to be held at the site or at alternate location if approved by the Agency.
- .4 Meetings to be attended by the Contractor's Project Manager and the Site superintendent of the site.

2. **CONTRACTORS TEAM**

2.1 The Contractor's construction team shall comply with the following minimum requirements:

- 2.1.1 One Project Manager – minimum of 10 years’ experience with projects of similar size, scope and complexity, to serve as the single point of contact between the Contractor and the Owner.
- 2.1.2 Three Site Supervisor – minimum of 10 years’ experience with projects of similar size, scope and complexity, and experienced in coordinating construction work within an occupied facility where CSA-Z317.13-17 Infection Control During Construction, Renovation and Maintenance of Health Care Facility applied.
- 2.1.3 Identify Sub Trades: Flooring Work, Doors and Millwork Work trades must have a minimum of 10 years experience in projects of similar scope, scale and complexity.

1. **REQUEST FOR INFORMATION – PROPOSAL SUBMISSION**

1.1 The Bidders are required to provide a comprehensive point-by-point response in the electronic bidding system for each of the items listed in this section. The information is to be uploaded in the appropriate upload area in the online Bidding System. Each of the uploaded information should clearly identify each item to which it is responding (by number and heading, i.e. 1.1, 1.2.1, 1.2.2, etc.).

1.2 The evaluation committee will review and evaluate the information provided by Bidders in response to the items listed below. Failure to provide a response to any of these requirements may deem the submission non-responsive and subsequently no points will be assigned during the evaluation process. Information submitted is subject to verification, and further pertinent information may be obtained from references. Reference checks by the Agency may not be limited to those listed in the Respondent's Submission.

1.3 **Company Profile**

1.3.1 Explain in detail your Organization's philosophy, background and areas of expertise.

1.3.2 Provide details of your firm's Quality Management program.

1.3.3 Provide details of your firm's Health and Safety program.

1.3.4 Provide information on the annual value of work for years 2010 to 2019.

1.4 **Experience Leading Similar Projects**

1.4.1 List and provide a description of **three** recently completed projects within the years 2010 to 2019 which demonstrate the relevant capabilities of your firm in providing construction services for Commercial and Institutional (ICI) projects.

1.4.2 Projects referenced shall be similar in scope, scale and complexity to the Owners Statement of Requirements – Scope of Work referenced in Section 1 of the Terms of Reference and of Appendix 8.2 Specifications.

1.4.3 For each project listed, provide the following information:

.1 Role played by your firm and services provided.

.2 The total value of the project.

.3 Project start and substantial completion date.

.4 The name, title, address and telephone number of the client and Consultant contact for reference purposes.

1.5 **Project Team and Experience**

1.5.1 Propose your Team as referenced in Section 2 - Contractors Team.

1.5.2 Provide an organization chart identifying all Key Personnel to be assigned and show the reporting relationships among these individuals.

**Regional Municipality of Peel Document 2020-546P Request for Information
Procurement Division CONSTRUCTION SERVICES FOR LOCALIZED
INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE
FACILITIES WITHIN THE REGION OF PEEL**

- .1 Identify personnel assigned to each site
- .2 Provide duties and responsibilities of all Key Personnel.
- 1.5.3 For the Project manager and Site superintendents provide a brief curricula vita describing the following:
 - .1 Years of experience specifically related to this type of work.
 - .2 Work history / years with the firm
 - .3 Completed project listing
 - .4 Education and professional affiliations
- 1.5.4 Identify Subtrade Experience
 - .1 As referenced in section 2, please provide project references for the following subtrades:
 - .1 Flooring
 - .2 Doors
 - .3 Millwork
 - .2 List and provide a description of two recently completed projects within the years 2010 to 2019 which demonstrate relevant capabilities of the firm in providing services for Industrial, commercial and institutional (ICI) projects
 - .3 Projects referenced shall be similar in scope, scale and complexity o the requirements of the work under this document
 - .4 For each project listed, provide the following information:
 - .1 Detail description of the nature of the work
 - .2 Role played by the firm and services provided
 - .3 The total value of the project
 - .4 The name, title, address, and telephone number of the client and consultant contact for reference purposes
- 1.6 **Proposed Work Plan**
 - 1.6.1 Provide proposed work plan to demonstrate the Critical Stages / Milestones referenced in Section 1. Will be met.
 - 1.6.2 Vendors are to consider these dates in the development of their proposed work plan(s) for consideration by the Agency.
 - 1.6.3 For the purposes of this contract the Vendor is to start the work no later than August 12, 2020.
 - 1.6.4 Provide details to demonstrate:
 - .1 Your firms understanding of the scope
 - .2 Approach to completing the deliverables
 - .3 Expected challenges
 - .4 Strategies to improve project timelines
 - 1.6.5 Provide a schedule detailed to the subtrades activities (Level 3 Gantt chart or other graphic schedule) that demonstrate your understanding of the project and in accordance with key milestones

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- .1 The schedule shall include all details required to successfully deliver the Project. The Contractor shall make their own determination as to the sequence of the below items; the list is not intended to restrict the Contractor, but rather to be coordinated with the milestone dates listed elsewhere in these documents.
 - .1 Identification of critical path, predecessors, successors activities, lags (negative and positive) floats, merge bias, constraints (hard and preferential).
 - .2 Project Kick-off Meetings with Owner
 - .3 Preparation and submission of documents to Owner
 - .4 Submission of shop drawings and samples
 - .5 Order and delivery of materials and equipment
 - .6 Mobilizing to each site
 - .7 Demolition
 - .8 List relevant construction activities for each scope
 - .9 Commissioning
 - .10 Substantial Completion
 - .11 Project Closeout/Demobilization
 - .12 Final Completion of Contract

SCHEDULE 1

Supplementary Conditions for Standard Construction Document CCDC2 2008 Stipulated Price Contract

SC.1 GENERAL

These Supplementary Conditions presuppose the use of the Standard Construction Document CCDC2 – 2008 Stipulated Price Contract. These “Supplementary Conditions” void, supersede or amend the “Agreement”, “Definitions” and “General Conditions” as hereinafter provided, as the case may be.

SC.2 AGREEMENT

1. **Amend** Article A-1 THE WORK as follows:
 - (a) **add** the following word to the beginning of paragraph 1.1, “diligently”,
 - (b) **add** the following as new paragraph 1.4:

“1.4 provide all the labour, materials, equipment, machinery, Products and work including, without limitation, all Commissioning services required by the Contract Documents in order to fully complete and construct the Work and in accordance with, and satisfaction of, all applicable federal, provincial, municipal and local laws, regulations, rules, by-laws, guidelines, standards, permits, statutes, ordinances, and codes including, without limitation, those relating to occupational health and safety and any and all obligations, responsibilities and duties required by or set out in any site plan agreement or approval, attributable to the Place of the Work and/or the proposed development therein, and furnish efficient business and construction administration and superintendence consistent with the interests of the Owner.”
2. **Add** the following documents to the existing list of Contract Documents set out in Article A-3 CONTRACT DOCUMENTS:
 - Addenda, as issued
 - Instructions to Bidders
 - Supplementary General Conditions to CCDC2-2008
 - Agreement to Bond
 - Specifications

Division 1:

Section 01 20 00	Price and Payment Procedures
Section 01 30 00	Instructions to All Trades
Section 01 31 00	Instructions to Contractor
Section 01 35 30	Health and Safety
Section 01 35 33	Infection Control Procedures
Section 01 42 13	Abbreviations & Acronyms
Section 01 62 00	Product Options
Section 01 70 00	Closeout Requirements

Section 01 74 00	Cleaning
Division 2:	
Section 02 41 00	Demolition
Division 6:	
Section 06 10 00	General Trades
Section 06 40 00	Architectural Woodwork & Solid Surfaces
Division 7:	
Section 07 84 00	Fire Stopping
Section 07 90 00	Joint Sealers
Division 8:	
Section 08 10 00	Hollow Metal Doors, Frames & Screens
Section 08 14 00	Wood Doors (Scope 1 and 2 only)
Section 08 70 00	Hardware (Scope 1 and 2 only)
Division 9:	
Section 09 29 00	Gypsum Board
Section 09 31 00	Ceramic Tile
Section 09 51 00	Acoustic Ceilings
Section 09 65 00	Resilient Flooring
Section 09 67 00	Applied Flooring
Section 09 90 00	Painting
Division 11:	
Section 11 40 00	Foodservice Equipment
Section 11 41 00	Trailer Equipment
Division 21:	
Section 21 05 01	Mechanical General Requirements
Section 21 12 01	Fire Sprinkler Systems
Division 22:	
Section 22 11 18	Domestic Water Piping
Section 22 13 17	Drainage Waste and Storm Piping
Section 22 42 01	Plumbing Specialties and Accessories
Section 22 42 02	Plumbing Fixtures
Division 23:	
Section 23 31 14	Ductwork--Low Pressure Metallic to 500PA
Section 23 33 46	Flexible Ducts
Section 23 37 13	Grilles
Division 26:	
Section 26 01 00	Electrical General Requirements
Section 26 05 00	Basic Materials and Methods
• Drawings	
Malton Village Drawings:	
A0-0	Title Page
Architectural:	
SP-1	Site Plan
SP-2	Exterior Walkway Repairs Demolition Floor Plans & Proposed Floor Plans
SP-3	Walkway Repairs Demolition Floor Plans & Proposed Floor Plans

A1-1	Basement Demolition Plan Flooring Replacement
A1-2	Staff Lounge – Second Floor Demo Plan, Proposed Plan, and Reflected Ceiling Plan
A1-3	Staff Lounge – Second Floor Finishes Plan, Kitchen Plan, Kitchen Sections, and Details
A2-1	Ground Floor Plan Door Repairs
A2-2	Second Floor Plan Door Repairs
A2-3	Third Floor Plan Door Repairs
A2-7	Detail Floor Plans Resident Rooms
A2-8	Sliding Door Sections and Details
Mechanical:	
M101	Part Floor Plan – Kitchen Plumbing
M102	Part Floor Plans – Plumbing & Sprinklers
M201	Partial Floor Plan – HVAC (Demolition & Proposed)
Electrical:	
E100	Legend & Details
E101	Demolition Layout – Existing Kitchen- Electrical (Basement Part Plan)
E102	Electrical Layout – New Kitchen (Basement Part Plan)
E103	Demolition Layout – Electrical (Level 2 Part Plan)
E104	Existing Services – Electrical (Basement Level)
E201	Electrical Layout (Level 2 Part Plan)
E301	Single Line Diagram, Schedules & Details
Food Services:	
FS-100	Existing Main Kitchen Equipment Layout & Legend Basement Plan
FS-101	New Main Kitchen Equipment Layout & Legend Basement Level
FS-102	New Main Kitchen Equipment MEP Schedule
FS-103	New Main Kitchen Equipment Depression Basement Level
Tall Pines Drawings:	
A0-0	Title Page
Architectural:	
SP-1	Site Plan and Key Plan
A1-1	Partial Basement Floor Plan & Penthouse Floor Plan
A1-2	Second Floor Plan Mechanical & Storage Room
Flooring:	
A2-4	Ground Floor Plan Door Repairs
A2-5	Second Floor Plan Door Repairs
A2-6	Third Floor Plan Door Repairs
A2-7	Detail Floor Plans Resident Rooms
A2-8	Sliding Door Sections and Details
Mechanical:	
M101	Floor Plans – Plumbing
M102	Part Floor Plans – Plumbing
Electrical:	

E201	Demolition Layout Electrical – Basement Level
Sheridan Villa Drawings:	
A0-0	Title Page
Architectural:	
SP-1	Site Plan
A1-1	Second Floor Servery Plans
A1-2	Third Floor Servery Plans
Mechanical:	
M101	Part Floor Plans – Plumbing
M201	Partial Second and Third Floors Plan – HVAC Layout (Demo & Prop)
Electrical:	
E201	Power & Systems Layout Second & Third Floors (Part Plans)
Food Services:	
FS-300	Existing Food Services Equipment Layout
FS-301	New Food Services Equipment Layout
FS-Trailers	Temporary Kitchen Malton Village
• Guidelines for Maintaining Fire Safety During Construction in Existing Buildings (Bound Separately)	
• FS-Trailers Temporary Kitchen Malton Village (Bound Separately)	
• Asbestos Assessment Report (Bound Separately)	
• CCDC2 Stipulated Price Contract 2008 - This is not attached but forms part of the Contract	
• Digital Bid Bond	
• Performance Bond substantially in the form required under the Construction Act - This is not attached but forms part of the Contract	
• Labour and Material Payment Bond substantially in the form required under the Construction Act - This is not attached but forms part of the Contract	
• Owner’s Staff/Other Contractors Project Construction Coordination Form	
• Owner’s Staff/Other Contractors Anticipated to Attend Site for Contractor Coordination	
• Form of Release at Substantial Performance of the Work	
• Site Pictures	
• Online Bidding System forms	

3. **Add** the following new paragraph 3.2 to Article A-3 CONTRACT DOCUMENTS:

“3.2 If either the Specifications or the Request for Proposals (or other procurement document issued by the Owner) provide for more than one improvement to be made under the Contract, and such improvements are to be made to lands that are not contiguous, then each such improvement is deemed to be made and performed under a separate contract for the purposes determining Substantial Performance of the Work and

completion of the contract, and for any other purpose under section 2 of the Construction Act, and the relevant provisions of this Contract will be deemed amended accordingly.

- 3.3 Paragraph 3.2 will apply to all of the Contractor's contracts with its Subcontractors and Suppliers working on each such improvement on a pass through basis. The Contractor shall include in all of its contracts with Subcontractors and Suppliers notice of such deeming of separate contracts for such purposes and shall ensure that it separates the Work and the supply of Products for each improvement."
4. **Delete** ARTICLE A-5 PAYMENT in its entirety and **replace** with the following:
"ARTICLE A-5 PAYMENT
- 5.1 Subject to, and in accordance with, the provisions of the Contract Documents and the *Construction Act* the Owner shall:
- .1 make monthly progress payments to the Contractor on account of the Contract Price when due in the amount certified by the Consultant together with such Value Added Taxes as may be applicable to such amount certified by the Consultant;
 - .2 upon Substantial Performance of the Work, pay the Contractor the unpaid balance of the basic holdback amount when due together with such Value Added Taxes as may be applicable to such payment; and
 - .3 upon the issuance of the final certificate for payment, pay to the Contractor the unpaid balance of the Contract Price when due together with such Value Added Taxes as may be applicable to such payment.
- 5.2 As such payments become due, the Contractor shall, in accordance with the terms of its agreements with any Subcontractors, Suppliers and workmen, pay all of its Subcontractors, Suppliers and workmen in full on account of work properly performed or Products properly supplied, as applicable, less any holdback monies retained in compliance with the *Construction Act*.
- 5.3 In the event of loss or damage occurring where payment becomes due under the property and boiler and machinery insurance policies, payments shall be made to the Contractor in accordance with the provisions of GC 11.1 – INSURANCE of the General Conditions.
- 5.4 Interest
- .1 Should either party fail to make payments as they become due under the terms of the Contract or in an award by arbitration or court, interest at the greater of one per cent per annum above the bank rate and the minimum rate required under the *Construction Act* on such unpaid amounts shall also become due and payable

until payment. Such interest shall be compounded on a monthly basis. The bank rate shall be the rate established by the Bank of Canada as the minimum rate at which the Bank of Canada makes short term advances to the chartered banks.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.4.1 of this Agreement on the amount of any claim advanced and for which the Contractor is thereafter entitled to payment, either pursuant to Part 8 – DISPUTE RESOLUTION of the General Conditions, or otherwise, from the date the amount would have been due and payable under the Contract, had it not been in dispute, until the date it is paid.”

SC.3 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

1. In paragraph 6.1, **delete** the words “or other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.”, and **delete** the words “or other form of electronic communication”.
2. **Add** the following new paragraph 6.2 to Article A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING:

“6.2 In addition to the addresses, requirements and timelines set out in paragraph 6.1, the following applies:

- .1 for the purposes of Part I.1 the Construction Act (Prompt Payment) and Part 5 – PAYMENT,
 - (i) applications for payment and Proper Invoices will be considered given or delivered by the Contractor to the Owner when they are received by the Owner and such receipt can be verified; and
 - (ii) notices of non-payment will be considered to have been given or delivered by the Owner to the Contractor when they have been sent by the Owner and such delivery can be verified, and
- .2 for the purposes of Part II.1 of the Construction Act (Adjudication), any notices, communications or delivery of documents to be given under the Construction Act will:
 - (i) in the case of the Owner, be given by the Contractor, by electronic mail, to adjudication@peelregion.ca and to the individuals and locations indicated in the Owner’s Notice in Writing delivered to the Contractor prior to the commencement of the Work; and
 - (ii) in the case of the Contractor, be given by the Owner to individuals and locations indicated in the Contractor’s Bidder Submission.”

SC.4 LANGUAGE OF THE CONTRACT

1. **Delete** paragraph 7.1 and **replace** with the following:
“7.1 When the Contract Documents are prepared in both English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English language shall prevail.”

SC.5 SUBCONTRACTORS

1. **Add** new ARTICLE A-9 – ASSIGNMENT OF SUBCONTRACTS, as follows:
“ARTICLE A-9 ASSIGNMENT OF SUBCONTRACTS
 - 9.1 The Owner shall not be deemed by virtue of the Contract or for any other reason to have any contractual relationship with or obligation to any Subcontractor or Supplier but the Contractor hereby agrees that in the event that:
 - .1 the Contract is terminated; or
 - .2 the Contractor’s right to continue the Work is terminated;and at the sole and absolute option of the Owner, any or all subcontracts for Work or Products as may be selected by the Owner, in its sole and absolute discretion, shall, upon notice to the Contractor and the affected Subcontractors and Suppliers from the Owner, be assigned to the Owner, without any further action being necessary from the Contractor or the affected Subcontractors and Suppliers and in order to ensure the Owner’s rights, the Contractor shall:
 - .3 contractually obligate each of its Subcontractors and Suppliers to agree that each such subcontract shall be assignable, at the Owner’s option, to the Owner, upon delivery of the notice described above, in the event that:
 - (i) the Contract is terminated; or
 - (ii) the Contractor’s right to continue the Work is terminated.
 - 9.2 The Contractor shall provide satisfactory evidence to the Owner that this obligation has been fulfilled.”

SC.6 DEFINITIONS

1. In definition “1. Change Directive”, **delete** the words “within the general scope of the Contract Documents”.
2. In definition “4. Consultant”, **add** the following sentence after the last sentence:
“The words “Engineer”, “Architect” or “Consultant” wherever used in the Contract Documents shall be regarded as synonymous.”
3. In definition “8. Contract Time”, **delete** “Substantial Performance of the Work” and **replace** with “the Substantial Performance Date”.

4. In definition "9. Contractor", **add** the following sentence after the second sentence: "For the purpose of the Contract, the words "Contractor", "Vendor" or "General Contractor" shall be regarded as synonymous."
5. In definition "10. Drawings", **add** "and approved, in writing, by the Owner" after the word "issued," in the second line.
6. In definition "13. Place of the Work", **add** the following sentence: "The term "Place of the Work" and "Site" wherever used in the Contract Documents shall be regarded as synonymous."
7. In definition "16. Provide", **add** the following after "install":

"or supply, install and connect as applicable, complete and in place, including accessories, finishes, tests, and services required to render each item so specified complete and ready for use."
8. In definition "17. Shop Drawings", **delete** "which the Contractor provides" and **replace** it with "to be provided by the Contractor".
9. In definition "18. Specifications", **add** "and approved, in writing, by the Owner" after "issued," in the first line.
10. In definition "25. Work", **add** ", Products, installation, Commissioning and Testing, checkout, start-up, testing" after "total construction".
11. **Delete** definition "26. Working Day" in its entirety and **replace** with the following:

"26. Working Day

Working Day means a day when the Regional Municipality of Peel is open, Monday to Friday, and does not include weekends or statutory holidays."
12. **Add** the following new definitions in the appropriate order alphabetically:

"Authorities Having Jurisdiction

The phrase Authorities Having Jurisdiction or the term Authorities means those authorities having jurisdiction under law over the Work or parts thereof."

"Commission and Test

Commission and Test means, and Commissioning and Testing refers to, the procedure which includes testing, reviewing, inspecting, adjusting and measuring Work performed by the Contractor to demonstrate and verify the installation, operation and performance of all components and the entire system, including certification of any such Commissioning and Testing."

"Construction Schedule

Construction Schedule means the schedule indicating the timing of major activities of the Work submitted by the Contractor and approved in writing by the Owner including attaining Substantial Performance of the Work by the Substantial Performance Date, as described in GC 3.5 – CONSTRUCTION SCHEDULE."

“Contract Completion

Contract Completion means when the entire Work except those items arising from the provisions of GC 12.3 – Warranty has been performed to the requirements of the Contract Documents and is so certified by the Consultant.”

“Install

Install means the placement of materials, equipment, or components, including receiving, unloading, transporting, storage, uncrating and installing, and performance of such testing and finish work as is compatible with the degree of installation specified.”

“Other Contractor

Other Contractor means an individual, firm, partnership or corporation having a separate contract with the Owner for work other than that required by the Contract Documents.”

“Proper Invoice

Proper Invoice means an application for payment in the form of invoice provided by the Owner to the Contractor, if applicable, containing the information that may be required for the application for payment to constitute a “proper invoice” under the Construction Act, including the following:

1. All of the information specified to be included in a proper invoice as set out in section 6.1 of the Construction Act, namely:
 - a. the Contractor’s name and address;
 - b. the date of the application for payment and the period during which the Work was performed;
 - c. information identifying the authority, whether in the Contract or otherwise, under which the Work was performed;
 - d. a description, including quantity where appropriate, of the Work performed and Products supplied;
 - e. the amount payable for the Work performed, and the payment terms; and
 - f. the name, title, telephone number and mailing address of the person to whom payment is to be sent;
2. an original statutory declaration in the form of CCDC 9A, or other form of statutory declaration that includes the same unqualified declaration, certifying that all accounts of the Contractor have been paid in full, less only the amounts of holdback due to them for the relevant dates, that all liabilities incurred by the Contractor and its subcontractors and suppliers in carrying out the Contract have been discharged and that all liens under the Contract have

- expired or have been satisfied, discharged or provided for by payment;
3. the total amount of expenditures to date and the total estimated expenditures to be made for the remaining balance of the Work;
 4. satisfactory evidence in the form of a Certificate of Clearance issued by the Workplace Safety and Insurance Board that the Contractor has made suitable provision for meeting any liability under the *Workplace Safety and Insurance Act, 1997* prior to the release of any monthly progress payment;
 5. any certificates, inspection reports, or data resulting from Commissioning and Testing required under the Contract Documents confirming the satisfactory completion of such Commissioning and Testing; and
 6. any additional information that the Owner or the Consultant may reasonably require.”

“Release

Release means a release by the Contractor substantially in the form set out in the Contract Documents or as the Owner may prescribe.”

“Reports

Reports means the Reports set out in Article A-3 – CONTRACT DOCUMENTS.”

“Rules of Mediation and Arbitration

Rules of Mediation and Arbitration mean the rules as provided in CCDC 40 in effect at the time of bid close.”

“Substantial Performance Date

Substantial Performance Date means the date by which the Contractor shall attain Substantial Performance of the Work as specified in Article A-1 – THE WORK.”

“Supply or Furnish

Supply or Furnish means fabrication or procurement of materials, equipment, or components, or performance of services to the extent specified and shown. Where used with respect to materials, equipment, or components, the term includes crating and delivery to the Place of the Work but is not intended to include installation of items, either temporary or final.”

SC.7 – GC 1.1 CONTRACT DOCUMENTS

1. **Delete** the first sentence in paragraph 1.1.1 and **replace** it with the following:
“The intent of the Contract Documents is to include the construction, labour, Products, Construction Equipment and other services necessary, complementary or ancillary, for the performance and completion of the Work by the Contractor in accordance with the Contract Documents or properly inferable from them.”

2. In paragraph 1.1.6, **add** the following at the end of the provision: "or in establishing the extent of the work to be performed by a trade."

3. In paragraph 1.1.7.1, **add** after "from highest to lowest, shall be:"

- The Agreement between the Owner and the Contractor
- Addenda, as Issued
- The Definitions
- Instructions to Bidders
- Online Bidding System Forms
- Supplementary General Conditions to CCDC2-2008
- Agreement to Bond
- Specifications

Division 1:

Section 01 20 00	Price and Payment Procedures
Section 01 30 00	Instructions to All Trades
Section 01 31 00	Instructions to Contractor
Section 01 35 30	Health and Safety
Section 01 35 33	Infection Control Procedures
Section 01 42 13	Abbreviations & Acronyms
Section 01 62 00	Product Options
Section 01 70 00	Closeout Requirements
Section 01 74 00	Cleaning

Division 2:

Section 02 41 00	Demolition
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Division 6:

Section 06 10 00	General Trades
Section 06 40 00	Architectural Woodwork & Solid Surfaces

Division 7:

Section 07 84 00	Fire Stopping
Section 07 90 00	Joint Sealers

Division 8:

Section 08 10 00	Hollow Metal Doors, Frames & Screens
Section 08 14 00	Wood Doors (Scope 1 and 2 only)
Section 08 70 00	Hardware (Scope 1 and 2 only)

Division 9:

Section 09 29 00	Gypsum Board
Section 09 31 00	Ceramic Tile
Section 09 51 00	Acoustic Ceilings
Section 09 65 00	Resilient Flooring
Section 09 67 00	Fluid Applied Flooring
Section 09 90 00	Painting

Division 11:

Section 11 40 00	Foodservice Equipment
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Division 21:

Section 21 05 01	Mechanical General Requirements
Section 21 12 01	Fire Sprinkler Systems

Division 22:	
Section 22 11 18	Domestic Water Piping
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Section 26 05 00	Basic Materials and Methods

- Drawings (**Bound Separately**)

Malton Village Drawings:

A0-0 Title Page

Architectural:

SP-1	Site Plan
SP-2	Exterior Walkway Repairs Demolition Floor Plans & Proposed Floor Plans
SP-3	Exterior Walkway Repairs Demolition Floor Plans & Proposed Floor Plans
A1-1	Basement Demolition Plan Flooring Replacement
A1-2	Staff Lounge – Second Floor Demo Plan, Proposed Plan, and Reflected Ceiling Plan
A1-3	Staff Lounge – Second Floor Finishes Plan, Kitchen Plan, Kitchen Sections, and Details
A2-1	Ground Floor Plan Door Repairs
A2-2	Second Floor Plan Door Repairs
A2-3	Third Floor Plan Door Repairs
A2-7	Detail Floor Plans Resident Rooms
A2-8	Sliding Door Sections and Details

Mechanical:

M101	Part Floor Plan – Kitchen Plumbing
M102	Part Floor Plans – Plumbing & Sprinklers
M201	Partial Floor Plan – HVAC (Demolition & Proposed)

Electrical:

E100	Legend & Details
E101	Demolition Layout – Existing Kitchen- Electrical (Basement Part Plan)
E102	Electrical Layout – New Kitchen (Basement Part Plan)
E103	Demolition Layout – Electrical (Level 2 Part Plan)
E104	Existing Services – Electrical (Basement Level)
E201	Electrical Layout (Level 2 Part Plan)
E301	Single Line Diagram, Schedules & Details

Food Services:

FS-100	Existing Main Kitchen Equipment Layout & Legend Plan
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FS-101 New Main Kitchen Equipment Layout & Legend Basement Level
FS-102 New Main Kitchen Equipment MEP Schedule
FS-103 New Main Kitchen Equipment Depression Basement Level

Tall Pines Drawings:

A0-0 Title Page

Architectural:

SP-1 Site Plan and Key Plan
A1-1 Partial Basement Floor Plan & Penthouse Floor Plan
A1-2 Second Floor Plan Mechanical & Storage Room Flooring
A2-4 Ground Floor Plan Door Repairs
A2-5 Second Floor Plan Door Repairs
A2-6 Third Floor Plan Door Repairs
A2-7 Detail Floor Plans Resident Rooms
A2-8 Sliding Door Sections and Details

Mechanical:

M101 Floor Plans – Plumbing
M102 Part Floor Plans – Plumbing

Electrical:

E201 Demolition Layout Electrical – Basement Level

Sheridan Villa Drawings:

A0-0 Title Page

Architectural:

SP-1 Site Plan
A1-1 Second Floor Servery Plans
A1-2 Third Floor Servery Plans

Mechanical:

M101 Part Floor Plans – Plumbing
M201 Partial Second and Third Floors Plan – HVAC Layout (Demo & Prop)

Electrical:

E201 Power & Systems Layout Second & Third Floors (Part Plans)

Food Services:

FS-300 Existing Food Services Equipment Layout
FS-301 New Food Services Equipment Layout

- FS-Trailers Temporary Kitchen Malton Village (**Bound Separately**)
- Guidelines for Maintaining Fire Safety During Construction in Existing Buildings (**Bound Separately**)
- Asbestos Assessment Report (**Bound Separately**)
- CCDC2 Stipulated Price Contract 2008 - This is not attached but forms part of the Contract
- Digital Bid Bond
- Performance Bond substantially in the form required under the Construction Act - This is not attached but forms part of the Contract
- Labour and Material Payment Bond substantially in the form required under the Construction Act - This is not attached but forms part of the Contract
- Owner's Staff/Other Contractors Project Construction Coordination Form

- Owner's Staff/Other Contractors Anticipated to Attend Site for Contractor Coordination
 - Form of Release at Substantial Performance of the Work
 - Site Pictures
4. In the first sentence of paragraph 1.1.9, **delete** "and shall remain the Consultant's property" and **replace** with "not the Contractor's property"
5. **Add** new paragraph 1.1.11 and paragraph 1.1.12, as follows:
- 1.1.11 The Contractor shall review the Contract Documents and shall report promptly to the Owner and the Consultant any error, inconsistency, or omission the Contractor may discover. If the Contractor does discover any error, inconsistency, or omission in the Contract Documents, the Contractor shall not proceed with the Work affected until the error, inconsistency or omission has been addressed and in dealing with such error, inconsistency or omission the Contractor shall co-operate with the Owner in good faith to resolve such errors, inconsistency or omission so as to avoid any increase in the Contract Price or delay in the progress of the Work.
- 1.1.12 The Contractor declares and represents that in entering into the Contract with the Owner for the performance of the Work, it has reviewed any and all documentation including, without limitation, the Reports provided by the Owner and has either visually investigated for itself the character of the Work to be done and all local conditions including, without limitation, the position of all pole lines, conduits, watermains, sewers and other underground and overground utilities and structures, or that, not having so reviewed or visually investigated, the Contractor has assumed and does hereby assume all risk of conditions now existing or arising in the course of the Work which could have been reasonably identified by a visual inspection or which are identified or inferred in any information provided by the Owner including, without limitation, the Reports, which might or could make the Work, or any items thereof more expensive in character, or more onerous to fulfill, than was contemplated or known when the Contract was signed."

SC.8 – GC 1.4 ASSIGNMENT

1. **Delete** paragraph 1.4.1 in its entirety and **replace** it with the following:
- 1.4.1 The Contractor shall not assign the Contract, or any portion thereof, without the prior written consent of the Owner, which consent may not be unreasonably withheld. The Owner shall be entitled to assign the Contract to any person, corporation, or other entity (the "Assignee"). Upon the assumption by the Assignee of the Owner's obligations under the Contract, the Owner shall be released from its obligations arising under the Contract."

SC.9 TIME IS OF THE ESSENCE OF THE CONTRACT

1. **Add** new GC 1.5 TIME as follows:

“GC 1.5 TIME

- 1.5.1 All time limits stated in the Contract Documents are of the essence of the Contract.”

SC.10 CONFIDENTIALITY AND CO-OPERATION, CONSULTATION AND CO-ORDINATION

1. **Add** new GC 1.6 CONFIDENTIAL INFORMATION/OWNERSHIP AND DISCLOSURE OF CONTRACTOR SUBMISSIONS as follows:

“GC 1.6 CONFIDENTIAL INFORMATION/OWNERSHIP AND DISCLOSURE OF CONTRACTOR SUBMISSIONS

- 1.6.1 The Contractor agrees to protect and maintain the confidentiality of all personal or other information, including all personal health information, that the Contractor accesses or of which the Contractor acquires knowledge of as a result of the services in this Contract, and agrees to use, collect, disclose, retain, protect and dispose of the personal (health) information only in accordance with all privacy legislation applicable to the Owner where it is acting on behalf of the Owner. Disclosure of any information shall be done only with the Owner’s prior written consent. The provisions of the indemnity clause in this Contract apply to any breach of privacy or confidentiality in this clause. The Contractor shall ensure that its directors, officers, employees, agents, subcontractors and anyone else for whom it is responsible in law all adhere to the requirements of this section regarding privacy and confidentiality.
- 1.6.2 The Owner, and the Owner’s responsibilities under this Contract, are subject to all applicable privacy legislation including the Municipal Freedom of Information and *Protection of Privacy Act*, R.S.O. 1990 c.M.56, as amended (“MFIPPA”) and/or the *Personal Health Information Protection Act*, 2004 (“PHIPA”) with respect to the collection, use, disclosure, retention and protection of confidential, sensitive or personal (health) information under the Owner’s custody and control. Under an MFIPPA request, all documents provided to the Owner by the Contractor pursuant to the procurement process which led to this Contract, and the Contract itself and associated documents, may be required by law to be made available to a requesting member of the public, with the possible exception that the party submitting certain information requests that it be treated as confidential and that there is an appropriate exemption to disclosure in MFIPPA, or a non-disclosure requirement in either MFIPPA or PHIPA.
- 1.6.3 The Contractor’s Submission, along with all correspondence, documentation and information provided to the Owner by any Contractor in connection with or arising out of the Contractor’s Submission, once received by the Owner, shall become the property of the Owner and may be appended to any agreement and/or purchase order with the successful Contractor. Contractors must identify in their Submissions any scientific,

technical, proprietary, commercial or other confidential information, the disclosure of which could cause them injury.

- 1.6.4 In purchases where a public opening of the Contractor's Submission will be taking place, the name of each Contractor and the lump sum price contained in their Submission shall be read out by the Owner at the public opening.
 - 1.6.5 Where award is to be made by Regional Council, the Peel Police Services Board or the Board of Directors of Peel Housing Corporation, information regarding all Contractor's Submissions, including names of each Contractor, lump sum prices and the annual or overall value of the Contract and/or the Contractor's Submissions shall be included in public reports to Regional Council or the relevant Boards such that the information is released publicly. The Contractor acknowledges that the Owner cannot guarantee it can honour requests to keep Contractor information confidential in light of applicable law requirements, and also in light of the need for transparency and public disclosure where release of the Contractor's information in public Council reports related to a specific project or procurement process is necessary."
2. **Add** new GC 1.7 CO-OPERATION, CONSULTATION AND CO-ORDINATION as follows:

"GC 1.7 CO-OPERATION, CONSULTATION AND CO-ORDINATION

- 1.7.1 The Contractor shall, at all times and as part of the Work, fully assist, co-operate, consult and co-ordinate with the Consultant and any other consultants or other entities retained or identified by the Owner which are related to the Project (collectively, the "Other Entities"). The objective of such assistance, co-operation, consultation and co-ordination is to make certain the Work is properly co-ordinated with and integrated with the work and services of the Other Entities.
- 1.7.2 Without limiting the generality of any other provision in the Contract, the Contractor shall attend all design, construction, general co-ordination and progress meetings relating to the Work between the Consultant, the Owner and Other Entities and any other meeting relating to the Project as requested by the Owner to discuss and resolve all matters and issues relating to the Project. The Contractor shall, on a timely basis, prepare and distribute detailed minutes to the Owner of the construction and progress meetings which it attends, if requested by the Owner."

SC.11 – GC 2.1 AUTHORITY OF THE CONSULTANT

1. In paragraph 2.1.3, **delete** "against whom the Contractor makes no reasonable objection and".

SC.12 – GC 2.2 ROLE OF THE CONSULTANT

1. **Amend** the provisions of GC 2.2 ROLE OF THE CONSULTANT as follows:

- (a) **Add** the following sentence to paragraph 2.2.3: “The presence of such project representatives at the Place of the Work will not abrogate any of the Contractor’s responsibility to perform the Work as required by the Contract Documents.”
- (b) In paragraph 2.2.6, **add** the words “to the Contractor” after the words “the Consultant will not be responsible” in each of the first two sentences of such paragraph.
- (c) In paragraph 2.2.7, **delete** the words “Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the” and **replace** with “The”.
- (d) In paragraph 2.2.17, **add** the words “to the Contractor” after the words “the Consultant does not guarantee”.

SC.13 – GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 1. **Amend** the provisions of GC 2.3 REVIEW AND INSPECTION OF THE WORK as follows:
 - (a) In paragraph 2.3.1, **delete** “the Consultant” and **replace** with “Consultant and Owner” in the second sentence only.
 - (b) **Amend** paragraph 2.3.2 as follows:
 - (i) **delete** “tests” and **replace** with “Commissioning and Testing”;
 - (ii) **add** “regulations, rules, by-laws, standards, guidelines, permits, statutes, codes,” before “laws or ordinances”;
 - (iii) **add** “, and any applicable Commissioning and Testing” at the end of the first sentence; and
 - (iv) **add** “and of any applicable Commissioning and Testing” at the end of the second sentence.
 - (c) In paragraph 2.3.6, **delete** “designated in” **replace** with “required by”, and **delete** “designated by” **replace** with “required by”, and **add** “or required by the Consultant” after “Contract Documents”.
 - (d) In paragraph 2.3.7, **replace** “designated in” with “required by”.

SC.14 – GC 2.4 DEFECTIVE WORK

- 1. In paragraph 2.4.1, **delete** “Consultant” in the first instance and **replace** it with “Consultant and/or Owner”, and **add** “, at the Contractor’s expense,” after “Contract Documents,”

SC.15 – GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

- 1. **Delete** paragraph 3.2.2.2 in its entirety and **replace** with “3.2.2.2 INTENTIONALLY DELETED.”
- 2. **Add** to paragraph 3.2.2.3:

- “.3 Without restricting the generality of paragraph 3.6.1, the Contractor acknowledges that the Contractor is the “constructor” and the “employer” within the meaning of the *Occupational Health and Safety Act* (Ontario) and the Contractor undertakes to carry out the duties, obligations and responsibilities of the constructor and the employer with respect to the Project. In the event that the Owner enters into more than one contract for the Project or engages Other Contractors to perform work or services at the Place of the Work while the Contractor is the “constructor” and the “employer”, the Owner shall require such Other Contractors to abide by the health and safety instructions, directions, policies and procedures of the Contractor. For clarity, the Contractor, in fulfilling the role of “constructor” and “employer”, shall have the right to remove the Other Contractors from the Place of the Work should they not comply with the Contractor's safety program and safety instructions. Without restricting the generality of any other term or condition in the Contract, the Contractor shall indemnify and hold harmless the Owner from any liability for claims, damages or penalties, including reasonable legal fees to defend any offences, arising from the Contractor's failure to comply with the duties, responsibilities and obligations of the constructor and the employer under the *Occupational Health and Safety Act* (Ontario).”
3. In paragraph 3.2.2.4, **add** the words “as the Owner considers appropriate” after the words “GC 11.1 – INSURANCE” in the second line.
4. In paragraph 3.2.3.3, **add**: “Failure by the Contractor to so report shall invalidate any claims against the Owner by reason of deficiencies in the work of Other Contractors or Owner's own forces except those deficiencies not then reasonably discoverable.”
5. **Add** paragraph 3.2.3.4 as follows: “co-ordinate and perform the Work with care and diligence so as to ensure that the Owner and the Other Contractors will be in a position to proceed according to schedule with the delivery, installation and testing of the equipment and other components to be incorporated into the Project and allow the Owner and the Other Contractors reasonable opportunity to receive and store materials and products on site and to perform their work.”

SC.16 – GC 3.4 DOCUMENT REVIEW

1. **Add** new paragraph 3.4.2:
- “3.4.2 Notwithstanding the foregoing, inconsistencies and 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.”

SC.17 – GC 3.5 CONSTRUCTION SCHEDULE

1. **Delete** paragraph 3.5.1 and substitute the following:
- “3.5.1 The Contractor shall:

- .1 prior to commencement of construction, prepare and submit to the Owner and the Consultant for their review and acceptance a construction schedule indicating the critical path for the Project, using “Primavera Project Planner” or equivalent, demonstrating that the Work will be performed in conformity with the Contract Time, and shall conform to the phasing and sequencing requirements for the Work as set out in the Contract Documents or as otherwise required by the Consultant or the Owner including, without limitation, a Products delivery schedule with respect to the Products whose delivery is critical to the schedule of the Work. The Contractor shall provide the schedule information required by this paragraph 3.5.1.1 in both electronic format and hard copy. Once approved by the Owner and the Consultant, the construction schedule submitted by the Contractor under this paragraph 3.5.1.1, as updated by the Contractor and approved by the Owner, shall become the “Construction Schedule”;
 - .2 monitor the progress of the Work on a weekly basis relative to the Construction Schedule and update the Construction Schedule on a monthly basis;
 - .3 perform the Work in accordance with the Construction Schedule;
 - .4 advise the Consultant of any revisions required to the Construction Schedule as a result of extension of the Contract Time in accordance with PART 6 – CHANGES IN THE WORK; and
 - .5 identify potential variances between scheduling and scheduled completion dates and implement necessary adjustments in the Construction Schedule in order to meet the Substantial Performance Date.
- 3.5.2 On request of the Consultant, the Contractor shall provide information regarding the progress of the Work or any part of it, or, copies, schedules and orders covering materials, components and services. The Contractor shall cooperate fully with the Consultant, and shall ensure that all Subcontractors and Suppliers and anyone for whom the Subcontractors and Suppliers may be responsible also cooperate and make available on request the same documents.
- 3.5.3 Without limiting the other obligations of the Contractor under GC3.5, the Contractor shall not amend the Construction Schedule (including, without limitation, any changes to the critical path) without the prior written approval of the Owner.”

SC.18 – GC 3.6 CONTRACTOR’S PERSONNEL COMMITMENT

1. **Delete** GC 3.6 – SUPERVISION in its entirety and **replace** it with the following:
“GC 3.6 CONTRACTOR’S PERSONNEL COMMITMENT

- 3.6.1 The Contractor shall furnish a competent and adequate staff, who shall be in attendance at the Place of the Work at all times, as necessary, for the proper administration, co-ordination, supervision and superintendence of the Work; organize the procurement of all materials and equipment so that they will be available at the time they are needed for the Work; and keep an adequate force of skilled workmen on the job to complete the Work in accordance with all requirements of the Contract Documents.
- 3.6.2 Prior to commencement of the Work, the Contractor shall select a competent and experienced full time project manager (the "Project Manager") who shall be in attendance at the Place of the Work or on the road and engaged in the Work at all times, and a competent and experienced full time site supervisor (the "Site Supervisor") who shall be in attendance at the Place of the Work at all times. Both the Project Manager and Site Supervisor shall be Gold Seal Certified or equivalent. The Project Manager shall have full responsibility for the prosecution of the Work, with full authority to act in all matters as may be necessary for the proper co-ordination, supervision, direction and technical administration of the Work, who shall attend site meetings in order to render reports on the progress of the Work and who shall have authority to bind the Contractor in all matters related to this Contract. The Project Manager and the Site Supervisor shall be satisfactory to the Owner and shall not be changed except for good reason and with the prior written approval of the Owner.
- 3.6.3 The Project Manager and Site Supervisor shall represent the Contractor at the Place of the Work and notices and instructions given to the Project Manager and/or the Site Supervisor shall be held to have been received by the Contractor.
- 3.6.4 The Contractor may not change its Project Manager or its Site Supervisor without the Owner's prior written approval which shall not be unreasonably withheld. Further, the Contractor shall not employ or continue to employ on the Work anyone to whom the Owner may reasonably object.
- 3.6.5. The Contractor shall provide the Owner and the Consultant with the names, addresses and telephone numbers of the Project Manager, the Site Supervisor and other responsible field persons who may be contacted for emergency and other reasons during non-working hours."

SC.19 – GC 3.7 SUBCONTRACTORS AND SUPPLIERS

1. In paragraph 3.7.4, **add** "or anyone else performing the Work" after "Supplier".
2. **Add** new paragraph 3.7.7 as follows:

"3.7.7 The Contractor shall not change any of the Subcontractors or Suppliers proposed by him in writing and accepted by the Owner at the signing of the Contract without the Owner's prior written consent or execute any

subcontracts for the performance of the Work without the Owner's prior written consent."

SC.20 – GC 3.8 LABOUR AND PRODUCTS

1. Amend paragraph 3.8.2 as follows:
 - (a) **add** "and free from defects" after "new"; and
 - (b) **delete** the second sentence of paragraph 3.8.2 and **replace** it with the following:

"All Products and workmanship shall be in every respect of the best quality and the Work shall be performed in accordance with the best modern practice. Whenever the Contract Documents, or directions of the Consultant, admit of a reasonable doubt about what is permissible, and when they fail to state the quality of any Work, the interpretation that requires the quality be consistent with the quality of similar Products specified is to be followed."
2. **Delete** paragraph 3.8.3 and **replace** it with:

"3.8.3 The Contractor shall:

 - .1 maintain good order and discipline among all personnel engaged on the Work;
 - .2 not employ any persons on the Project whose labour affiliation (or lack thereof) is incompatible with other labour employed in connection with this Project or at the Place of the Work; and
 - .3 act promptly on all problems of labour relations including grievances and jurisdictional disputes. The Contractor shall not employ on the Work anyone not skilled in the task assigned to him and the Owner has the right to require the Contractor to remove from the workforce for the Work any employee, representative or other personnel deemed by the Owner, acting reasonably, to be incompetent, careless or otherwise objectionable, or whose actions are contrary to public interest or inconsistent with the best interest of the Owner."
3. **Add** new paragraph 3.8.4:

"3.8.4 The cost for overtime required beyond the normal working day to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or work that the Contractor elects to perform at overtime rates without the Owner or the Consultant requesting it shall not be chargeable to the Owner and shall be at the sole cost and expense of the Contractor."
4. **Add** new paragraph 3.8.5:

"3.8.5 The Owner and the Contractor acknowledge and agree that the beneficial ownership of any portion of the Products required by the Contract Documents to be incorporated and form part of the Work shall pass to the

Owner immediately upon payment therefore or upon incorporation thereof as part of the Work, whichever first occurs. For greater certainty, title to Products delivered, but not installed, shall pass to the Owner when paid for (subject to any applicable holdback). The Contractor agrees to promptly execute and deliver to the Owner, from time to time as the Owner may require, any further documentation required to identify, evidence, perfect or protect the Owner's beneficial, or registered, interest in the Products, including, without limitation, any registrations pursuant to the Personal Property Security Act (Ontario). Notwithstanding the foregoing, the Contractor acknowledges and agrees that it shall continue to bear the risk of loss or damage with respect to the Work until the date of acceptance of the Work by the Owner in accordance with the Contract Documents."

SC.21 – GC 3.10 SHOP DRAWINGS

1. In paragraph 3.10.1, **add** the following at the end of the paragraph: "or as the Consultant may reasonably request".

SC.22 – GC 3.13 CLEAN UP

1. **Add** paragraph 3.13.4 as follows:
"3.13.4 The Owner shall have the right to back charge cleaning to the Contractor if it is not done within 24 hours of written notice to clean and the Owner shall have the right to back charge cost of damage to the Place of the Work caused by Contractor's, Subcontractor's or Supplier's transportation in and out of the Place of the Work if not repaired within 5 Working Days of written notice to repair or before final payment, whichever is earlier."

SC.23 OPERATIONAL RISKS

1. **Add** new GC 3.14 – OPERATIONAL RISKS as follows:

"GC 3.14 OPERATIONAL RISKS

- 3.14.1 The position of all pole lines, conduits, water mains, sewers and other underground and overground utilities and structures is not necessarily shown on the Contract Drawings, and, where shown, the accuracy of the position of such utilities and structures is not guaranteed. Before starting Work, the Contractor shall inform himself of the exact locations of such utilities and structures, and shall be liable for damages, as a result of any act or omission, to any utilities identified or reasonably to have been identified, whether or not the result of negligence, by those for whom he is responsible. Unless otherwise specified, the Contractor shall temporarily support or relocate such utilities and structures, or temporarily remove them, and restore them, to the satisfaction of the owners of the utilities and structures. The Contractor waives any claim and releases the Owner and the agents of the Owner from all liability for damages suffered as a result of such Contract Drawings or any operation required under this paragraph.

- 3.14.2 Permanent relocation of underground or overhead utilities will be performed and paid for by the Owner, if necessitated by coincidence of lines or grades, or both unless such relocation has been specifically included within the Work by the drawings or specifications. The Contractor shall be responsible for scheduling permanent relocations of utilities with the Work.
- 3.14.3 The Consultant will provide the Contractor in writing with bench marks and points of reference to be used by him in setting out the Work. The Owner will be responsible only for the correctness of the information so supplied. From these bench marks and points of reference the Contractor will do his own setting out. The setting out by the Contractor shall include but shall not be limited to the preparation of grade sheets, the installation of centre lines stakes, grade stakes, offsets and site rails.”

SC.24 – GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

1. **Delete** GC 5.1 in its entirety and **replace** it with the following:

“GC 5.1 ESTIMATES

- 5.1.1 On the 25th day of each month during the Contract Time, the Contractor will deliver to the Consultant a draft of the Contractor’s proposed application for payment for all of the Work performed by the Contractor in that month (a “**Draft Application**”), in order to facilitate and expedite payments under GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, GC 5.3 – PROGRESS PAYMENT and GC 5.8 – FINAL PAYMENT, including an estimate of the Work to be performed and Products to be delivered at the date of such application for payment but before the end of that month and including any reports or certificates confirming the satisfactory completion of any Commissioning and Testing of any part of the Work that the Contractor will include in its final and proper application for payment pursuant to paragraph 5.2.1.
- 5.1.2 The Contractor shall review with the Consultant and the Owner, at a scheduled time, the Draft Application and the percentage of the Work completed for each item indicated in the schedule of values. This procedure shall be complied with for each Draft Application for payment.
- 5.1.3 Nothing in GC 5.1 – ESTIMATES is intended to condition, pre-condition, prevent or delay the Contractor’s right to submit its final and proper applications for payment in accordance with paragraph 5.2.1 of this Contract and the Construction Act.”

SC.25 – GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

1. **Delete** paragraphs 5.2.1 and 5.2.2 and **replace** them with the following:

“5.2.1 Notwithstanding GC 5.1 – ESTIMATES and the submission of a Draft Application, the Contractor shall submit its final and proper application for payment to the Consultant and the Owner monthly as the Work progresses on the first Working Day after the end of the month to which

the application for payment relates. Applications for payment not submitted on that day may be deferred by the Owner to the next following month. Applications for payment submitted after the 180th day after the end of the month to which the application for payment relates will not be accepted or paid for by the Owner.

- 5.2.2 The Contractor shall ensure that each application for payment for Work complies with the requirements set out in this Contract, and will include as part of it application for payment of all the documents and information required in this Part 5 – PAYMENT and required for a Proper Invoice, including any reports or certificates confirming the satisfactory completion of any Commissioning and Testing of any completed part of the Work. The Owner may, in its discretion, reject any application for payment that does not comply with GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT or GC 5.3 – PROGRESS PAYMENT, or the Owner may withhold up to 100% of the amounts otherwise payable in relation to that application for payment until such application for payment includes all of the documents and information required under this Part 5 – PAYMENT and for a Proper Invoice.”
2. **Add** new paragraphs 5.2.8 to 5.2.12 as follows:
- “5.2.8 The Contractor must provide with each application after the first, an original statutory declaration in the form of CCDC 9A, or other form of statutory declaration that includes the same unqualified declaration, certifying that all accounts for the subcontracts, construction machinery and equipment, materials, Products, labour and other indebtedness which may have been incurred by the Contractor and for which the Owner might in any way be held responsible have been paid in full, except for amounts properly retained as holdback or as an identified amount in dispute.
- 5.2.9 After the first application for payment, with each subsequent application for payment the Contractor shall submit evidence of compliance with the applicable worker’s compensation legislation at the Place of the Work, including payments due thereunder.
- 5.2.10 The Contractor shall submit with each application for payment, payment receipts for products and materials purchased under conditional sales contracts. Authorization for payment of products and materials purchased under conditional sales contracts shall not be made by the Owner until evidence of payment is submitted.
- 5.2.11 Payment by the Owner pursuant to the Contract shall not preclude the Owner from thereafter disputing any of the items involved and shall not be construed as acceptance of any part of the Work.
- 5.2.12 The Contractor shall utilize and submit 2 copies of the “Contractor’s Application for Payment”, in a form satisfactory to the Owner, when submitting the formal application for payment. In addition, a breakdown of approved Change Orders and percentage completed of each shall be included, in a form satisfactory to the Owner. Deviation or incomplete

submissions with respect to the approved breakdown will require resubmission of the application for payment.”

SC.26 – GC 5.3 PROGRESS PAYMENT

1. In paragraph 5.3.1.2, **delete** “10 calendar days” and **replace** with “5 Working Days”.

2. **Delete** paragraph 5.3.1.3 and **replace** with the following:

“.3 subject to the certifications set out in the Consultant’s certificate for payment and the Construction Act, including the delivery of a notice of non-payment under the Construction Act, the Owner shall make payment to the Contractor on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 days after the date that the Consultant or the Owner receives the Contractor’s application for payment and Proper Invoice in accordance with this Contract.”

3. **Add** the following as new paragraph 5.3.2:

“5.3.2 If the Contractor fails to comply with paragraph 5.2 – APPLICATIONS FOR PROGRESS PAYMENT or paragraph 10.4 – WORKERS COMPENSATION, the Owner shall not be required to make payments to the Contractor until the obligation has been complied with.”

SC.27 – GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

Add “Subject to paragraph 3.2 of Article A-3 – CONTRACT DOCUMENTS,” at the beginning of paragraph 5.4.1.

Add the following as new paragraph 5.4.4:

“5.4.4 At the time of issuance by the Consultant of the certificate of Substantial Performance of the Work, the Consultant shall:

- .1 notify the Contractor of the value of the Warranty Holdback required by paragraph 12.4 hereof;
- .2 prepare a separate certificate (the “Substantial Performance Payment Certificate”) showing:
 - (i) the value of work completed to date,
 - (ii) the value of outstanding or uncompleted work,
 - (iii) the value of the required Warranty Holdback,
 - (iv) the amount of the holdback being held in accordance with the *Construction Act* (allowing for any previous release of holdback to the Contractor in respect of completed Subcontractors, Suppliers and deliveries of pre-selected equipment),
 - (v) the amount due the Contractor; and
- .3 prepare a payment certificate releasing to the Contractor the holdback held in accordance with the *Construction Act* in respect of Work performed up to the date of Substantial Performance of

the Work, which will certify, among other matters, that all documents and information have been delivered by the Contractor that are required under GC 5.5 - PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK.”

SC.28 – GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

1. In paragraph 5.5.1.1, **add** “containing all of the information and documents required under this Contract and of a Proper Invoice and including all final reports and certificates confirming satisfactory completion of all required Commissioning and Testing, to the extent applicable” after “application for payment”.
2. **Amend** paragraph 5.5.1.2 as follows:
 - (a) **delete** “CCDC 9A Statutory Declaration” and **replace** with “an original statutory declaration in the form of CCDC 9A, or other form of statutory declaration that includes the same unqualified declaration, that all liabilities incurred by the Contractor and its Subcontractors and Suppliers in carrying out the Contract have been discharged, and that all liens in respect of the Contract and subcontracts thereunder have expired or have been satisfied, discharged or provided for by payment into court;”
 - (b) **add** “materials,” before “labour”;
 - (c) **add** “or by any Subcontractor or Supplier” after “Contractor”;
 - (d) **delete** “.” and **replace** with “, and”
3. **Add** paragraphs 5.5.1.3 to 5.5.1.8 as follows:
 - .3 submit the documents required to demonstrate compliance under GC 10.4 – WORKERS’ COMPENSATION;
 - .4 submit a written undertaking by the Contractor to complete expeditiously any outstanding Work and to discharge all unfulfilled obligations under the Contract;
 - .5 submit the Contractor’s final claim for all amounts incurred before and on the date of Substantial Performance of the Work;
 - .6 submit a Release by the Contractor;
 - .7 submit any certificates, inspection reports, or data resulting from Commissioning and Testing required under the Contract Documents confirming the satisfactory completion of such Commissioning and Testing; and
 - .8 submit all manuals, as-built drawings and other turnover documents required under the Contract Documents.”
4. **Delete** the words “statement as provided in” and **replace** with “other documents required to be provided pursuant to” in paragraph 5.5.2.
5. **Delete** paragraph 5.5.3 in its entirety and **replace** with the following:

“5.5.3 Notwithstanding the foregoing, if the Contractor has not provided the documents required by the General Conditions by the 30th day after the publication of the certificate of Substantial Performance of the Work, the Owner, at its discretion, shall be entitled to withhold an amount equal to up to 100 per cent of the amount of statutory holdback as security for the Contractor’s delivery of the outstanding document(s). In the event of a withholding under this GC5.5.3, the Owner shall pay the withheld amount to the Contractor upon the earlier of (a) the Contractor’s delivery of such documents, (b) the end of the limitation period related to any claim that could arise from the Contractor’s non-delivery, and (c) a determination by the Consultant that such withheld amount should be released to the Contractor.”

6. **Amend** paragraph 5.5.4 as follows:

(a) **delete** “the holdback amount authorized by the certificate for payment of the holdback amount” and **replace** with “the statutory holdback amount and any other holdback amount authorized by the certificate for payment of the holdback, subject to the delivery by the Owner of a notice of non-payment under the *Construction Act*”; and

(b) **delete** “third party monetary claims against the Contractor which are enforceable against the Owner” and **replace** with “claims against the Contractor”.

7. **Add** a new paragraph 5.5.6 as follows:

“5.5.6 If the Work includes more than one improvement to be made under the Contract, and such improvements are deemed to be made and performed under separate contracts pursuant to paragraph 3.2 of Article A-3 – CONTRACT DOCUMENTS, then, pursuant to the Construction Act, the Owner shall release holdback in accordance with this GC 5.5 upon the issuance of a certificate of Substantial Performance of the Work for each such improvement. The parties acknowledge and agree that, notwithstanding any release of holdback pursuant to this paragraph 5.5.6, the Owner shall be entitled to withhold amounts for the purposes of and pursuant to GC 12.4 – WARRANTY HOLDBACK as if the Owner had not made any release of holdback pursuant to this GC 5.5.6.”

SC.29 – GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

1. **Delete** GC 5.6 in its entirety and **replace** with “5.6 INTENTIONALLY DELETED.”

SC.30 – GC 5.7 FINAL PAYMENT

1. In paragraph 5.7.1, **add** “as defined in Section 2(3) of the *Construction Act*” after the words “Work is completed”, and **add** “containing all of the documents and information required under the Contract or of a Proper Invoice and including all final reports and certificates confirming satisfactory completion of all required Commissioning and Testing, to the extent applicable” after the words “final payment”.

2. **Amend** paragraph 5.7.4 as follows:

- (a) **delete** “5 calendar days after” and **replace** with “28 calendar days after”; and
- (b) **delete** “.” and **replace** with “provided that the Contractor shall provide the Owner and the Consultant, in a form acceptable to the Owner, a sworn statement that all accounts for the materials, labour, subcontracts, Products, Construction Equipment and other indebtedness which may have been incurred by the Contractor and for which the Owner might in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified amount in dispute and submit the documents required to demonstrate compliance with paragraph 10.4 – WORKERS’ COMPENSATION.”
3. **Add** the following as new paragraph 5.7.5:
- “5.7.5 At the time of issuance by the Consultant of the final certificate of payment, the Consultant shall:
- .1 Prepare a certificate (the “Completion Payment Certificate”) showing:
- (i) the final Contract Price,
- (ii) the amount of the further 10 per cent holdback (based on the value of further work completed over and above the value of work completed shown in the Substantial Performance Payment Certificate),
- (iii) the value of the required Warranty Holdback, and
- (iv) the amount due to the Contractor.
- .2 Prepare a payment certificate releasing to the Contractor the further 10 per cent holdback. Subject to the provisions of the *Construction Act*, including the Owner’s issuance of a notice of non-payment of holdback, and the submission by the Contractor of the documents required by the General Conditions, such further 10 per cent holdback shall become payable after 60 days from the date of completion of the Work as established by the final certificate of payment.

If, at the end of the Warranty Period, any monies are still being retained by the Owner as Warranty Holdback or for other reasons, the Consultant will issue a certificate (the “**Warranty Holdback Payment Certificate**”) releasing the monies due the Contractor.

SC.31 – GC 5.8 WITHHOLDING OF PAYMENT

1. **Amend** paragraph 5.8.1 as follows:
- (a) **delete** “If” and **replace** with “Subject to applicable lien legislation, if”.

SC.32 LIENS

1. **Add** new GC 5.10 LIENS as follows:

“GC 5.10 LIENS

- 5.10.1 Notwithstanding any other term or condition in the Contract Documents, the Owner shall not be obligated to make payment to the Contractor, if at any time such certificate or payment was otherwise due:
- .1 a claim for lien arising from the performance of the Work has been registered against the Place of Work or given to the Owner;
 - .2 a written notice of lien has been delivered to the Owner in accordance with the Construction Act; or
 - .3 the Owner or mortgagee of the Place of Work has received a written notice of lien.
- 5.10.2 In the event that a construction lien arising from the performance of the Work is registered against the Place of Work, or given to the Owner, the Contractor shall, within 10 calendar days, at its sole expense, vacate, discharge or otherwise remove the lien from title to the premises. If the lien is merely vacated, the Contractor shall, if requested, undertake the Owner’s defence of any subsequent lawsuit commenced in respect of the lien at the Contractor’s sole expense.
- 5.10.3 In the event that the Contractor fails or refuses to vacate or discharge a construction lien within the time prescribed above, if the Owner receives a notice of lien, the Owner shall, at its option, be entitled to take all steps necessary to vacate and/or discharge the lien, and all costs and expenses incurred by the Owner in so doing (including, without limitation, legal fees on a full indemnity basis, disbursements, the cost of any security to vacate the lien and any payment which may ultimately be made out of or pursuant to security posted to vacate the lien) shall be for the account of the Contractor, and the Owner may deduct such amounts from amounts otherwise due or owing to the Contractor. If the Owner vacates the lien, it shall be entitled to retain all amounts it would be required to retain pursuant to the Construction Act if the lien had not been vacated.
- 5.10.4 Without limiting any of the foregoing, the Contractor shall indemnify the Owner for all costs (including, without limitation, legal fees on a full indemnity basis) it may occur in connection with the claim for lien or subsequent lawsuit brought in connection with the lien, or in connection with any other claim or lawsuit brought against the Owner by any person that provided services or materials to the Place of Work which constituted a part of the Work.
- 5.10.5 This GC 5.10 does not apply to construction liens claimed by the Contractor.”

SC.33 – GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

1. In paragraph 6.1.1.2, **add** “or a Change Directive” after “Change Order”
2. **Add** new paragraphs 6.1.3 to paragraph 6.1.8 as follows:

- “6.1.3 The value of a change shall be determined in one or more of the following methods: (a) by estimate and acceptance in a lump sum; (b) by unit prices set out in the Contract or subsequently agreed upon; (c) by cost and a fixed or percentage fee.
- 6.1.4 Where changes in the Work are paid for under method (b) of paragraph 6.1.3, the value of changes is based on the net difference in quantities with the appropriate unit rate applied.
- 6.1.5 Where changes in the Work are to be paid under method (c) of paragraph 6.1.3, the cost to the Owner shall be the actual cost of credits and where additional work is required, the cost to the Owner shall be the actual cost plus a percentage covering overhead and profit, after all credits included in the change have been deducted. Where changes in the Work are to be paid under method (c) of paragraph 6.1.3, an allowance covering overhead and profit shall be calculated as follows:
- .1 on Work performed by the Contractor’s own forces, 10 per cent; and
 - .2 on Work performed by Subcontractors or Suppliers, five per cent.
- 6.1.6 If any change in the Work is made by which the amount of Work to be done is decreased, or if the whole or any portion of the Work is dispensed with, the Owner shall, subject to paragraph 6.3.3, not be liable to the Contractor for any costs or damages whatsoever including, without limitation, any indirect, consequential or special damages, such as loss of profits, loss of opportunity or loss of productivity.
- 6.1.7 A Change Order shall be a final determination or adjustment in the Contract Time and Contract Price. There shall be no adjustments to the Contract Time or Contract Price or compensation or payment of any kind whatsoever (including, without limitation, claims for loss of productivity) based on the aggregate number, scope or value of changes in the Work whether resulting from Change Order or Change Directive.
- 6.1.8 It is the express intention of the parties that any claims by the Contractor for a change in the Contract Price and/or Contract Time shall be barred unless there has been strict compliance with the requirements of all of PART 6 – CHANGES IN THE WORK and the Contractor has notified the Owner and Consultant, within the earlier of: (i) ten (10) Working Days of any event or circumstance of which Contractor has knowledge which provides the Contractor with a change in the Contract Price and/or Contract Time pursuant to the terms and conditions of the Contract, or (ii) such other period of time expressly allowed for by the Contract. Such notice from the Contractor shall include without limitation, sufficient and adequate information and documentation to allow the Consultant and the Owner to properly consider the claim of the Contractor (including, without limitation, the cause of the change in the Contract Time, a description of the impact on the change in the Contract Time will have on the critical path of the Construction Schedule and a description of the portions of the

Work affected thereby and a breakdown of the change in the Contract Price, together with all pertinent details and all other backup information and documents). The Contractor has an ongoing obligation to augment the information and documents described in this paragraph as it becomes available. No course of conduct or dealing between the parties, no express or implied acceptance of alterations or additions to the Work, and no claims that the Owner has been unjustly enriched by any alteration or addition to the Work, whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional payment under this Contract or a claim for any extension of the Contract Time."

SC.34 – GC 6.3 CHANGE DIRECTIVE

1. **Delete** GC 6.3.2 and **replace** it with "6.3.2 INTENTIONALLY DELETED."
2. In paragraph 6.3.7.1, **add** "while directly engaged in the work attributable to the change" after "in the direct employ of the Contractor".
3. In paragraph 6.3.7.1(2), **add** "required as a result of the change" after "materials or equipment".
4. In paragraph 6.3.7.3, **add** "reasonable" before "travel".
5. In paragraph 6.3.7.5, **delete** the words "and hand tools not owned by the workers" and **replace** with the words "exclusive of hand tools".
6. In paragraph 6.3.7.9, **add** the words "provided however that the costs included in such amounts shall be limited to the actual costs of the items described in this paragraph 6.3.7 changing "Contractor" to "Subcontractor" as necessary.
7. **Add** the following words to the end of paragraph 6.3.7.17: "not caused by the Contractor or anyone for whom it is responsible".
8. At the end of paragraph 6.3.7, **add** the following:
"All other costs attributable to the change in the Work including the costs of all administrative or supervisory personnel are included in overhead and profit calculated in accordance with the provisions of paragraph 6.1.5 of GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES".

SC.35 – GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

1. In paragraph 6.4.1.1 and paragraph 6.4.1.2, **add** "or the Reports" after "Contract Documents".
2. In paragraph 6.4.2, **add** the words "Having regard to and subject to the liabilities and responsibilities assumed by the Contractor pursuant to GC 3.14 – OPERATIONAL RISK," at the beginning of the first and second sentences.
3. **Add** new paragraph 6.4.5 as follows:
"6.4.5 Without limiting the generality of any other provision in the Contract Documents, during the performance of the Work, the Contractor shall, as a part of the Contract Price and Work, perform any additional geotechnical and subsurface and other investigations, tests and studies

beyond those being provided by the Owner, which a reasonable and prudent contractor would conduct to ascertain the nature and extent of subsurface or otherwise concealed physical conditions at the Place of the Work.”

SC.36 – GC 6.5 DELAYS

1. In paragraph 6.5.1, **delete** “them” in the second line and **replace** it with “the Consultant” and **delete** "performance of the Work" in the first line and **replace** it with "performance of a critical path activity on the Construction Schedule".
2. In paragraph 6.5.1, **add** the following to the end of the paragraph:
“, provided that the Owner shall not be liable for any other costs or damages whatsoever including, without limitation, any indirect, consequential, or special damages, such as loss of profits, loss of opportunity or loss of productivity resulting from such delay.”
3. **Delete** paragraph 6.5.2 in its entirety.
4. **Delete** paragraph 6.5.3 in its entirety and **replace** it with the following:
6.5.3 If the Contractor is delayed in the performance of the Work by:
 - .1 labour disputes, strikes, lock-outs affecting the Work or the Project,
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions,
 - .4 any cause beyond the Contractor’s control that would make performance of the work impossible other than one resulting from a default or breach of Contract by the Contractor, or
 - .5 a stop work order issued by a court or other public authority, including but not limited to an order issued as the result of an act or omission of the Contractor or any person or other entity employed or engaged by the Contractor directly or indirectly,

Then the Contract Time shall be extended for such reasonable time as the Consultant may recommend in consultation with the Contractor. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the Contractor agrees to a shorter extension. The Contractor shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the Owner, Consultant or anyone employed or engaged by them directly or indirectly provided that the Owner shall, in such instance, only be liable for reasonable costs incurred by the Contractor and shall not be liable for any other costs or damages whatsoever including, without limitation, any indirect, consequential, or special damages, such as loss of profits, loss of opportunity or loss of productivity resulting from such delay. Notwithstanding the foregoing, the Contractor shall use its best efforts to minimize the impact of such event upon the performance of the Work and Contract Time.

5. In paragraph 6.5.4, **add** “and Owner” after “Consultant” and **add** the following to the end:

“Without limiting the generality of the foregoing, the following shall also apply to the event of delay dealt with by paragraphs 6.5.1, 6.5.2 or 6.5.3:

- .1 the notice provided by the Contractor as set out in this paragraph 6.5.4 shall include, without limitation, the information and documentation required by paragraph 6.1.8.
- .2 the Contractor shall take all reasonable steps to minimize the impact of the delay event upon the performance of the Work, the Contract Time and the Contract Price, resume performance of all its obligations under the Contract affected by the delay as soon as practicable and use all reasonable endeavours to remedy any failure to perform.

Failure to adhere strictly to these notice provisions shall constitute a waiver and release of any obligation of the Owner to extend the Contract Time as a result of such delay and of any claim by the Contractor for costs as a result of such delay.

6. **Add** new paragraph 6.5.6, as follows:

“6.5.6 If the Work should be behind schedule for a reason other than as described in paragraphs 6.5.1 to 6.5.3 (inclusive), or if any of the Subcontractors or Suppliers or anyone for whom they are responsible delay the progress of any portion of the Work necessary to complete the Work on schedule, the Contractor shall not be relieved of its obligations under the Contract Documents and shall use all possible and, if necessary, extraordinary measures to bring the Work back on schedule. The Contractor shall exercise all reasonable means within its discretion, such as directing any Subcontractors or Suppliers creating delays to increase their labour forces and equipment, to improve the organization and expediting of the Work, or to work overtime as may be necessary. The Contractor shall provide any additional supervision, co-ordination and expediting, including overtime by its own personnel as may be required to achieve this end. The costs and expenses incurred by the use of such measures and overtime shall be borne by the Contractor, the Suppliers and/or the Subcontractors.”

SC.37 – GC 7.1 OWNER’S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR’S RIGHT TO CONTINUE WITH THE WORK, OR TERMINATE THE CONTRACT

1. In paragraph 7.1.1, **add** “or terminate the Contract” after “Work” in the third line.
2. In paragraph 7.1.2 **add** the words “, fails or neglects to maintain the latest Construction Schedule provided pursuant to paragraph 3.5” immediately following the word “properly” in the first line and delete the words “to a substantial degree and if the Consultant has given a written statement to the Owner and the Contractor that sufficient cause exists to justify such action.”

3. In paragraph 7.1.5, **add** “or terminates the Contract” after “Work” in the first line, and **add** “without prejudice to any other right or remedy which is available to the Owner” before “the Owner shall be”.
4. In paragraph 7.1.5.2, **delete** “until a final certificate for payment is issued”.
5. In paragraph 7.1.5.3, **delete** the words “; however, if such costs of finishing the Work is less than the unpaid balance of the Contract Price, the Owner shall pay the Contractor the difference”.
6. **Add** the following as new paragraphs 7.1.7 to 7.1.11:
 - “7.1.7 Notwithstanding any other provision in the Contract Documents, the Contract may be terminated by the Owner without cause. Any such termination shall be effected by delivery to the Contractor of a notice of termination, specifying the date upon which such termination becomes effective. The Owner’s entitlement to so terminate the Contract shall be absolute and unconditional and exercisable by the Owner in its sole and absolute discretion.
 - 7.1.8 In the event of any termination by the Owner pursuant to paragraph 7.1.7, the Contractor shall only be entitled to payment of the following amounts:
 - .1 that portion of the Contract Price relating to Work performed prior to the termination date, as certified by the Consultant; plus
 - .2 Subcontractor and sub-subcontractor cancellation costs (which costs shall not include loss of profit claims) reasonably incurred by the Contractor as the result of such termination; provided the Contractor has substantiated such costs to the Owner’s reasonable satisfaction and after the Owner has reviewed the details thereof; plus
 - .3 subject in all cases to the Owner being informed of all details relating thereto and the prior written approval of the Owner being obtained (which approval may not be unreasonably withheld), reasonable demobilization costs defined to include equipment and office dismantling, transportation to Contractor’s storage facility, lease or rental cancellation costs, transportation of the Contractor’s employees to their home offices, provided each such demobilization cost shall be reasonable and substantiated (to the Owner’s reasonable satisfaction) by the Contractor.
 - 7.1.9 Except as described in paragraph 7.1.8, the Contractor shall not be entitled to any additional reimbursement on account of any such termination including, without limitation, indirect, special, consequential or other damages, including, without limitation, loss of profits, loss of opportunity or loss of productivity, notwithstanding any other provision of the Contract Documents.
 - 7.1.10 The terms of the Contract, which expressly or by their nature are intended to survive the termination or discharge of the Contract, shall survive such

termination or discharge including, without limitation, GC 12.3 – WARRANTY.

7.1.11 Upon a termination, the Owner may publish a notice of termination in the form and manner prescribed in the *Construction Act*. For greater certainty, a termination in accordance with this GC 7.1 will be effective whether or not a notice of termination is published.”

SC.38 – GC 7.2 CONTRACTOR’S RIGHT TO STOP THE WORK OR TERMINATE THE CONTRACT

1. In paragraph 7.2.2, **delete** “20” and **replace** with “60”.
2. **Delete** paragraph 7.2.3.1 in its entirety and **replace** with “7.2.3.1 INTENTIONALLY DELETED.”
3. In paragraph 7.2.3.2, **add** “subject to the other terms and conditions of the Contract,” before “the Consultant”.
4. In paragraph 7.2.3.3, **add** “subject to the other terms and conditions of the Contract,” before “the Owner”.
5. In paragraph 7.2.3.4, **delete** the words “except for GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER”.
6. In paragraph 7.2.3, **add** “and instruct the Owner to correct the default in the five (5) Working Days immediately following the receipt of such notice.” at the end of the paragraph.
7. **Delete** paragraph 7.2.4. in its entirety, **renumber** paragraph 7.2.5 as paragraph 7.2.6 and **add** the following new paragraph 7.2.4 and new paragraph 7.2.5:
 - “7.2.4 If the default cannot be corrected in the 5 Working Days specified, the Owner shall be in compliance with the Contractor’s instructions if the Owner:
 - .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 corrects the default in accordance with such schedule.
 - 7.2.5 If the Owner fails to correct the default in the time specified or subsequently agreed upon, without prejudice to any other right or remedy the Contractor may have, the Contractor may suspend the Work for not more than 90 days or terminate the Contract.”

SC.39 – GC 8.1 AUTHORITY OF THE CONSULTANT

1. In paragraph 8.1.1, **delete** “.” at the end of the sentence and **replace** with “if the Owner and the Contractor both agree. If both parties do not agree to settle the dispute in accordance with GC 8.2 – NEGOTIATION, MEDIATION AND ARBITRATION, then either party may refer the dispute to the Courts.”

2. **Delete** paragraph 8.1.2 and paragraph 8.1.3 in their entirety and **replace** with the following:

“8.1.2 If a dispute is not resolved promptly, or the Owner and the Contractor cannot agree where agreement is required, the Consultant shall give such written instructions as in the Consultant’s opinion are necessary for the proper performance of the Work and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the Contract Documents, the Owner shall pay the Contractor the costs incurred by the Contractor in carrying out such instructions which the Contractor was required to do beyond what the Contract Documents correctly understood and interpreted would have required, including costs resulting from interruption of the Work.”

SC.40 – GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

1. In paragraph 8.2.1, **delete** “Rules of Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing” and **replace** with “Rules of Mediation and Arbitration, as applicable”.
2. In paragraph 8.2.1.2, **delete** the words “either party by notice in writing requests” and **replace** with “both parties agree”.
3. In paragraph 8.2.4, **delete** “Rules of Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing” and **replace** with “Rules of Mediation and Arbitration, as applicable”.
4. In paragraph 8.2.6, **delete** “Rules of Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing” and **replace** with “Rules of Mediation and Arbitration, as applicable”.
5. **Add** the following as a new paragraphs 8.2.9 and 8.2.10:
 - “8.2.9 Notwithstanding anything else in this Contract, in the event of a dispute relating to payment arising prior to the completion of the Work, the parties may adjudicate such dispute in accordance with the Construction Act. If the Contractor issues a notice of adjudication to the Owner, it will include with such notice a description of the reasons for its dispute that includes a reference to the applicable application for payment and Proper Invoice, all Notices in Writing demanding payment, authority for the claim under the Contract (including copies of any applicable Change Order, Change Directive or written approval of any change).
 - 8.2.10 The parties acknowledge and agree that the adjudication of a payment dispute in accordance with the Construction Act will not pause, withdraw, discontinue, or prejudice any mediation, arbitration, or court proceeding that relates to the same matter and that was commenced prior to the delivery of a notice of adjudication under the Construction Act unless the parties otherwise agree in writing.”

SC.41 – GC 9.1 PROTECTION OF WORK AND PROPERTY

1. In paragraph 9.1.1 and paragraph 9.1.3, **delete** “property adjacent to the Place of the Work” and **replace** with “property adjacent to, in the vicinity of or proximate to the Place of the Work”.
2. **Delete** paragraph 9.1.1.1 in its entirety and **replace** with “9.1.1.1 INTENTIONALLY DELETED.”

SC.42 – GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

1. **Add** the following new paragraphs 9.2.10, 9.2.11 and 9.2.13:
 - “9.2.10 Neither the Contractor nor anyone for whom it is responsible shall bring on to the Place of the Work any toxic or hazardous substances and materials except as needed in order to perform the Work. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed for fourteen (14) calendar days only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all Laws that are applicable at the Place of the Work. Without limiting the generality of any other provision in the Contract, the Contractor shall promptly provide the Owner with Material Safety Data Sheets for such toxic or hazardous substances or materials.
 - 9.2.11 The Contractor shall indemnify and hold harmless the Owner and Consultant and their respective officers, directors, agents and employees, independent contractors from and against any and all liabilities, costs, expenses, and claims resulting from bodily injury, including death, and damage to property of any person, corporation or other entity, that arises from the use by the Contractor or anyone for whom the Contractor is responsible of any toxic or hazardous substances or materials at the Place of the Work.
 - 9.2.12 The Contractor shall be familiar with, and comply with, the workplace hazardous materials information system. The Contractor shall ensure that all employees and Subcontractors and anyone for whom they are responsible who work with or in proximity to hazardous material fully understand all potential hazards and have been thoroughly trained to deal with any emergencies. Without limiting the generality of the foregoing, all employees and Subcontractors and anyone for whom they are responsible shall be able to:
 - .1 Recognize and understand the labelling on hazardous materials; and
 - .2 Understand material safety data sheets and are knowledgeable on how to safely use, store, handle and dispose of hazardous materials.
 - 9.1.13 The Contractor shall ensure all material safety data sheets pertinent to the completion of the Work are at the Place of the Work.”

SC.43 – GC 10.1 TAXES AND DUTIES

1. **Delete** GC 10.1 TAXES AND DUTIES in its entirety and **replace** with the following:
 - “10.1.1 The Contract Price shall include all taxes, tariffs and customs duties in effect at the time of the bid closing except for Value Added Taxes payable by the Owner to the Contractor as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
 - 10.1.2 Any increase or decrease in costs to the Contractor due to changes in such included taxes, tariffs and duties after the time of the bid closing shall increase or decrease the Contract Price accordingly.
 - 10.1.3 The Contractor shall provide a detailed breakdown of additional taxes, tariffs and duties in a form satisfactory to the Owner. Profit and overhead shall not be included in the increase or decrease in costs incurred by the Contractor due to changes in the aforementioned taxes, tariffs and duties.
 - 10.1.4 Where an exemption or recovery of government sales taxes, tariffs, customs duties or excise taxes is applicable to the Contract, the parties agree to co-operate with each other to obtain such exemptions. Refunds that are properly due to the Owner and have been recovered by the Contractor shall be promptly refunded to the Owner. In addition, any reduction or elimination of taxes, tariffs or customs duties that take effect after the date of bid closing resulting in savings to the Contractor shall be due to the Owner in the form of a credit to the Contract Price.”

SC.44 – GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

1. **Delete** paragraph 10.2.2 in its entirety and **replace** with the following:

“10.2.2. Without limiting the generality of any other provision in the Contract, the Contractor shall obtain and pay for, at its sole expense and cost, all permits, development approvals, licences, certificates, charges, refundable deposits, and approvals including, without limitation, building permit, site plan approval, water and sanitary sewer permits, water and sewer connection charges, site alteration permits, curb cut and road cut permits, sign permits, hydro approvals, and occupancy permit necessary for the performance of the Work and the use and occupation of the Work by the Owner in accordance with the Contract Documents, the cost of which shall all be included in the Contract Price.”
2. **Delete** paragraph 10.2.3 in its entirety and **replace** with the following:

“10.2.3 The Contractor shall comply, and shall require its employees, agents, Subcontractors, Suppliers and anyone for whom they are responsible to comply, with all laws, ordinances, guidelines, standards, permits, statutes, by-laws, rules, regulations, or codes and all of the Owner’s policies and procedures which are or become in force and are applicable to the performance of the Work including, without limitation, all those relating to the preservation of the public health, occupational health and safety and to construction safety.”

3. In paragraph 10.2.5, **delete** "The Contractor" and **replace** with "Subject to paragraph 3.4.1, the Contractor".
4. **Delete** paragraph 10.2.6 in its entirety and **replace** with the following:
"10.2.6 If the Contractor fails to notify the Owner and the Consultant in writing, fails to obtain direction as required in paragraph 10.2.5, and/or performs work that it knows or ought to have known that contravenes any laws, ordinances, guidelines, standards, permits, statutes, by-laws, rules, regulations, or codes, the Contractor shall be responsible for and shall correct the violations thereof, and shall bear the costs, expenses, and damages attributable to the failure to comply with the provisions of such laws, ordinances, guidelines, standards, permits, statutes, by-laws, rules, regulations, or codes."
5. **Add** new paragraph 10.2.8 as follows:
"10.2.8 Without limiting the generality of any other provision in the Contract Documents, the Contractor shall cause all certificates to be furnished that are required or given by the appropriate governmental or quasi-governmental Authorities as evidence that the Work as installed conforms with the laws and regulations of Authorities Having Jurisdiction, including, without limitation, certificates of compliance for the Owner's occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the Work, in the event that such governmental or quasi-governmental Authorities furnish such certificates."

SC.45 – GC 10.3 PATENT FEES

1. In paragraph 10.3.1, **add** "indemnify and" before "hold the" in the second line.
2. In paragraph 10.3.2, **add** "by the Owner" after "supplied to the Contractor."

SC.46 – GC 11.1 INSURANCE

1. **Delete** GC 11.1 and **replace** with the following:
"GC 11.1 INSURANCE
11.1.1 Without restricting the generality of GC 12.1 – INDEMNIFICATION, the Contractor shall provide, maintain and pay for the following insurance coverage's:
 1. Commercial General Liability insurance shall be with limits of not less than **\$2,000,000** per occurrence with an annual aggregate limit of not less than **\$4,000,000** within any policy year and a deductible not exceeding \$10,000. The policy shall be maintained for at least twenty-four (24) months from the date of Substantial Performance of the Work.

The insurance shall be in the name of the Contractor, include the Owner as an additional insured, and include bodily injury including death, personal injury, property damage including loss of use

thereof, contractual liability, non-owned automobile liability, owner's and contractor's protective, products and completed operations, employer's liability, contingent employer's liability with coverage including the operations and activities of the Contractor and those for whom the Contractor is in law responsible. The policy shall contain cross liability and severability of interest clauses.

The insurance coverage shall not be less than the insurance provided by IBC Form 2100, or its equivalent replacement, provided that IBC form 2100 shall contain the latest edition of the relevant CCDC endorsement form and shall include an endorsement with respect to sudden and accidental pollution acceptable to the Owner (including an extension for a standard provincial or territorial form of non-owned automobile liability policy) and IBC Form 2320.

The policy will include but is not limited to the liability of the insureds arising out of their general supervision, if any, or such operations with respect to safety or otherwise, or arising out of the ownership or control of the premises on which such operations are performed.

All liability coverage shall be maintained for completed operations hazards from the date of Contract Completion on an ongoing basis for a period of six (6) years following the date of Contract Completion.

To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the Contractor, the Owner may agree to increase the deductible amounts.

All policies of insurance shall be primary and shall not act as co-insurance or as excess coverage to any policies obtained by the Owner for its sole protection.

Prior to commencement of the Work and upon the placement, renewal, amendment or extension of all or any part of the insurance, the Contractor shall promptly provide the Owner with a certified true copy of the policy(ies) by an authorized representative of the insurer together with copies of any amending endorsements or a Certificate of Insurance on the Owner's form evidencing compliance with the policy requirements and endorsed to provide the Owner with not less than 30 days' notice in writing in advance of any cancellation, change or amendment restricting coverage.

2. Fidelity Bond or Employee Dishonesty Coverage in an amount of not less than Ten Thousand Dollars (\$10,000) including a Third Party Extension endorsement.

3. Standard Exclusions

3.1 In addition to the broad form property exclusions identified in IBC 4042 (1995) and 4047 (2000), the Contractor is not required to provide the following insurance coverages:

Cyber Risk
Mould
Terrorism

- 11.1.2 Prior to commencement of the Work and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the Contractor shall promptly provide the Owner with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the Work or Certificate of Insurance on the Owner's form evidencing compliance with the policy requirements and endorsed to provide the Owner with not less than 30 days' notice in writing in advance of any cancellation, change or amendment restricting coverage.
- 11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regard to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the Contract.
- 11.1.4 If the Contractor fails to provide or maintain insurance as required by the Contract Documents, then the Owner shall have the right to provide and maintain such insurance and give evidence to the Contractor and the Consultant. The Contractor shall pay the cost thereof to the Owner on demand or the Owner may deduct the cost from the amount which is due or may become due to the Contractor.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance, in the Province of Ontario and shall be at the approval, not unreasonably withheld, of the Owner.
- 11.1.6 If the Owner or the Consultant request that any adjudicators, other consultants, experts or administrators attend the Place of the Work in order to inspect or review any part of the Work, the Owner or the Consultant shall provide the Contractor with a Notice in Writing of such attendance. The Contractor shall ensure that the Place of the Work is safe for such attendance, inspection or review, and shall accompany such persons throughout the attendance to ensure any such attendance, inspection or review is completed in a safe manner."

SC.47 – GC 11.2 CONTRACT SECURITY

1. In paragraph 11.2.2, **delete** “in accordance with the latest edition of CCDC approved bond forms” and **replace** with “substantially in the forms required under the *Construction Act* and with a surety company deemed acceptable by the Owner.”
2. **Add** the following as new paragraph 11.2.3:
“11.2.3 The Contractor shall, as part of the Contract Price, provide a Performance Bond with a face value of 50 per cent of the Contract Price and a Labour and Material Payment Bond with a face value of 50 per cent of the Contract Price, substantially in the form required under the *Construction Act*. The Performance Bond shall be in effect for a period of not less than two years from the earlier of (a) the date of Substantial Performance of the Work or (b) the date on which a notice in respect of the default that is the subject of a claim under the Performance Bond is received by the surety for the Performance Bond. The Labour and Material Payment Bond shall be in effect for a period of not less than one year after the date on which the Contractor last performed Work on the Contract, including Work performed under any warranty or guarantees provided in the Contract.”

SC.48 – GC 12.1 INDEMNIFICATION

1. **Delete** paragraph 12.1.1 in its entirety and **replace** with the following:
“12.1.1 The Contractor shall indemnify the Owner, the Consultant and their respective officers, council members, Chairs, partners, agents, employees, servants, insurers, advisors, consultants, contractors, successors and assigns (collectively the “Indemnified Parties”), and save them harmless from and against any and all claims, demands, losses, costs, damages, actions, causes of action, suits or proceedings and all other liabilities, losses and expenses including bodily injury or death to any Person or loss or damage to property, court costs, interest, legal fees, adjusting fees and disbursements (collectively “claims”) made against or suffered or incurred by the Indemnified Parties, directly or indirectly and which arise from or are connected with:
 - .1 any failure or alleged failure by the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors and Suppliers may be responsible) to comply with the Contract Documents including any applicable Laws or Regulations, including provincial workers’ compensation laws or regulations;
 - .2 any infringement or alleged infringement by the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors and Suppliers may be responsible) of any intellectual property right including without limitation any misuse, passing off or infringement or alleged infringement of trade-marks;

- .3 any defective or potentially hazardous goods used by the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors and Suppliers may be responsible);
 - .4 any form of theft, fraud, or illegal activity by the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors and Suppliers may be responsible) or any of their respective agents, directors, officers, or employees;
 - .5 any wilful act, omission or negligence of the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors, and Suppliers may be responsible), or any of their respective agents, directors, officers, servants, contractors or employees;
 - .6 any negligence by the Contractor (or any Subcontractor, Supplier or anyone for whom the Contractor and/or its Subcontractors, and Suppliers may be responsible) directly or indirectly arising or contributing to or alleged to arise out of the Contractor's performance of or the failure to perform the Work, or out of the conditions of the work, the job site, adjoining land, driveways, streets or alleys used in connection with the performance of the Work under this Contract;
 - .7 any negligence, errors or omissions, or monies owing to the Owner for claims payable under this indemnity due to failure of any insurance required of Subcontractors or Suppliers thereof as retained by Contractor, but shall not include any claims arising solely from the active negligence of the party asking to be defended, indemnified or saved harmless."
2. **Delete** paragraphs 12.1.2 and 12.1.3 in their entirety and **replace** each with "INTENTIONALLY DELETED."

SC.49 – GC 12.2 WAIVER OF CLAIMS

1. **Delete** paragraph 12.2 in its entirety and **replace** with the following:
"GC 12.2 WAIVER OF CLAIMS
12.2.1 Subject to any rights or remedies provided by the *Construction Act*, as of the date of the final certificate for payment, the Contractor expressly waives and releases the Owner from all claims against the Owner including, without limitation, those that might arise from the negligence or breach of contract by the Owner except:
 - .1 those made in writing in compliance with the Contract Documents prior to the Contractor's application for final payment and still unsettled; and

- .2 those arising from the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES AND MATERIALS or GC 10.3 PATENT FEES.”

SC.50 – GC 12.3 WARRANTY

1. **Delete** paragraph 12.3.1 in its entirety and **replace** it with the following:

“12.3.1 The Contractor agrees to remedy, at its costs, any defects in materials and workmanship which are identified by the Owner within a period of 24 months (except where otherwise noted for a longer period of time in the Contract Documents) from the date of Substantial Performance of the Work (the “Warranty Period”). This warranty shall cover labour and material, including, without limitation, the costs of removal and replacement of covering materials. This warranty shall not limit extended warranties on any items of equipment or material called for elsewhere in the specifications or otherwise provided by any manufacturer of such equipment or material.”
2. In paragraph 12.3.3, **delete** “one year” and **replace** with “24 months”.
3. In paragraph 12.3.4, **delete** “one year” and **replace** with “24 months”.
4. **Add** the following to paragraph 12.3.5:

“The carrying out of the replacement work and making good of defects shall be executed at such times as convenient with the Owner which may entail overtime work on the part of the Contractor. Additional charges for overtime work in this regard must be borne by the Contractor.”
5. **Delete** paragraph 12.3.6 and **add** the following new paragraphs 12.3.6 to 12.3.9:

“12.3.6 Any material or equipment requiring excessive servicing during the Warranty Period (or free maintenance period, if applicable) shall be considered defective and the warranty (or free maintenance period) shall be deemed to take effect from the time that the defect has been corrected so as to cause excessive servicing to terminate.

12.3.7 The final payment certificate shall not relieve the Contractor from its responsibility under this GC 12.3 – WARRANTY.

12.3.8 Following Substantial Performance of the Work, and without limiting the Contractor’s warranty under this GC 12.3, the Contractor shall assign to the Owner, to the extent assignable, the benefit of all warranties and guarantees relating to the Work. The assignment shall expressly reserve the right of the Contractor to make any claims under such warranties and guarantees and such assignment shall in no way prejudice any rights of or benefits accruing to the Contractor pursuant to such warranties and guarantees.

12.3.9 The provisions of the GC 12.3 – WARRANTY shall not deprive the Owner of any action, right or remedy otherwise available to the Owner for the Contractor’s failure to fulfill its obligations or responsibilities under the Contract and shall not be construed as a waiver of claims in favour of the

Contractor or as a limitation on the time in which the Owner may pursue such other action, right or remedy. The warranties set out in the Contract are not supplemental to and do not limit or preclude the application of any other conditions and warranties, express or implied, by law or trade usage.”

6. **Add** the following as new GC 12.4:

“GC 12.4 WARRANTY HOLDBACK

12.4.1 The Contractor agrees that the Owner may withhold an amount of the payments due by the Owner to the Contractor hereunder as security for the Contractor’s performance of its warranty obligations hereunder (the **“Warranty Holdback”**). The amount of the Warranty Holdback shall be determined based on the contract price in accordance with the following table:

CONTRACT PRICE		VALUE OF WARRANTY HOLDBACK (\$)
FROM (\$)	TO (\$)	
Less than 0.1M		4 per cent of Final Contract Price
0.1 M	0.5 M	4,000 on first 0.1 M + 3.0 per cent on next 0.4M
0.5 M	1.0 M	16,000 on first 0.5 M + 2.4 per cent on next 0.5M
1.0 M	2.0 M	28,000 on first 1.0 M + 2.2 per cent on next 1.0M
2.0 M	4.0 M	50,000 on first 2.0 M + 2.0 per cent on next 2.0M
4.0 M	6.0 M	90,000 on first 4.0 M + 1.8 per cent on next 2.0M
6.0 M	10.0 M	126,000 on first 6.0M + 1.5 per cent on next 4.0M
Over 10.0 M		186,000 on first 10.0M + 1.0 per cent on balance

For the avoidance of doubt, the Warranty Holdback shall be adjusted from time to time to account for changes to the contract price as a result of approved Change Orders and Change Directives.

12.4.2 In order to fund the Warranty Holdback, the Owner may, at its sole discretion, retain the Warranty Holdback progressively as a percentage of some or all progress payment to the Contractor, or retain a lump sum upon the achievement of Substantial Performance of the Work or, if insufficient funds have been retained at the time of Substantial Performance of the Work, retain a portion of any remaining payment owing to the Contractor, including any remaining progress payment, final or finishing work payment, or the holdback under the *Construction Act*, if any.

12.4.3 The Owner shall release the Warranty Holdback, less any amount due to the Owner by the Contractor hereunder, at the end of the Warranty Period. Notwithstanding the foregoing:

- .1 The Contractor may apply in writing to the Owner at the time of Substantial Performance of the Work to substitute for the monies retained as the Warranty Holdback an alternative warranty security of equivalent or greater value comprising:

- (i) one or more irrevocable letters of credit, or
- (ii) another readily negotiable security.

Acceptance of any such alternative shall be at the sole discretion of the Owner.

Following receipt and acceptance of any such alternative security by the Owner, the Consultant shall release to the Contractor the monies previously retained for warranty security purposes.

The Owner may, at its discretion, allow the total Warranty Holdback to be made up in part of monies retained under the Contract and in part of an alternative warranty security as indicated in (a) and (b) above provided that the total value of such parts, as determined by the Owner, shall be not less than the required value as derived from the table set out above.

Such alternative warranty security or the monies derived therefrom, less any deductions made as provided for in the Contract, shall be released to the Contractor following the issuance by the Consultant of a Warranty Holdback Payment Certificate.”

SC.51 MISCELLANEOUS

1. **Add** new PART 13 MISCELLANEOUS as follows:

“PART 13 MISCELLANEOUS

GC 13.1 REVIEW BY OWNER AND REVIEW BY CONSULTANT

13.1.1 Neither the Owner’s and/or Consultant’s receipt, review or approval of any documents or the Work nor the failure of the Owner and/or Consultant’s to provide comment shall limit, waive or diminish the Contractor’s obligations, responsibilities, duties or liabilities under the Contract. The review or approval by the Owner and/or Consultant is intended only to ascertain that the document or the performance of the Contractor’s duties, liabilities, responsibilities or obligations under the Contract including, without limitation, the Work generally meets the intention of the Contract and is not an assurance or confirmation of the adequacy, quality, fitness, suitability or correctness of the Contractor’s obligations, responsibilities, duties and liabilities under the Contract including, without limitation, the Work, for which the Contractor is solely responsible in accordance with the Contract.

GC 13.2 CARE AND SKILL

13.2.1 The Contractor acknowledges, confirms, represents and warrants to the Owner that:

- .1 in performing the Work, it shall at all times exercise the degree of care and skill that ought to be exercised by contractors in performing work of the nature contemplated herein; and

- .2 it has the necessary experience, skill and expertise required to enable it to fulfill its obligations, duties, liabilities, and responsibilities herein.

GC 13.3 USE AND/OR OCCUPATION OF COMPLETED PORTIONS OF THE WORK

- 13.3.1 Upon the Owner's request, the Owner shall, at any time or times, have the right of occupying and/or using any part or parts of the Work (including, without limitation, for the purposes of installing and testing fittings and equipment), whether partially performed or entirely complete, or whether completed on schedule or not, before the completion of the Work.
- 13.3.2 In the event the Owner desires to exercise the privilege of occupancy and/or use of the Work as provided above, the Contractor shall co-operate with the Owner throughout in making available for the Owner's use such building services as heating, ventilation, cooling, water, lighting and telephone for the space or spaces to be occupied and/or used, and if the equipment required to furnish such services is not entirely completed at the time the Owner desires to occupy and/or use the aforesaid space or spaces, the Contractor shall make every reasonable effort to complete same as soon as possible to the extent that the necessary equipment can be put into operation and use and any extra cost beyond that originally required to complete the Work arising from such early occupancy and/or use shall be borne by the Owner.
- 13.3.3 In the event that the Owner exercises the privilege of occupancy and/or use of the Work as provided above, it agrees to do so, so as not to materially interfere with the respective work of the Contractor, Subcontractors or Suppliers and under the understanding that the Owner will be occupying premises within a construction site which will require compliance with all normal construction site requirements including, without limitation, health and safety requirements.
- 13.3.4 It shall be understood, however, that the Owner's occupancy and/or use of such space or spaces of the Work shall not constitute the Owner's acceptance of any Work, materials or equipment which are not in accordance with the requirements of the Contract Documents, nor affect the warranty period under the Contract, nor relieve the Contractor from his obligations, duties, responsibilities, and liabilities to complete the Work, nor for responsibility for loss or damage due to or arising out of defects in, or malfunctioning of, any Work, material or equipment, nor from any other unfulfilled duties, liabilities, obligations or responsibilities under the Contract nor from any other duty, liability, obligation or responsibility under the Contract including, without limitation, the Contractor's warranty obligations. If, however, damage results from any act by the Owner, the Owner shall assume its share of the responsibility for such damage.

GC 13.4 NON-INTERFERENCE

13.4.1 The Contractor acknowledges that the Place of the Work is and will continue to be occupied by the Owner and the Owner will continue to carry out its normal operations at the Place of the Work. The Contractor agrees to perform the Work in the least intrusive manner possible. Without limiting the generality of the foregoing, the Contractor acknowledges and agrees that it shall carry out its duties, responsibilities, and obligations under the Contract in such a manner so as not to disrupt or interfere with any of the Owner's or any third party's existing facilities and ongoing operations or activities or other operations located in the area adjacent to, in the vicinity of or proximate to the Place of the Work.

GC 13.5 LIQUIDATED DAMAGES

13.5.1 It is expressly agreed by the parties that if the date of Substantial Performance of the Work occurs later than the Substantial Performance Date, the Contractor shall pay to the Owner liquidated damages calculated as **\$300** for each calendar day that Substantial Performance of the Work extends beyond the Substantial Performance Date. It is expressly agreed that it is difficult to calculate the damages which would result from the Contractor's failure to attain Substantial Performance of the Work by the Substantial Performance Date, and the parties agree that the liquidated damages are not intended to be penalties but rather represent the parties' best estimate of damages resulting from the delay.

13.5.2 In the event that the Consultant reasonably determines that the Contractor is not progressing in accordance with the Construction Schedule with the result that the Contractor will not achieve Substantial Performance of the Work by the Substantial Performance Date, the Owner will commence to hold back amounts from payments due to the Contractor totalling an amount sufficient to cover the Consultant's estimate of liquidated damages that may be payable pursuant to paragraph 13.5.1. In the event that the Owner hold backs more than is owed pursuant to paragraph 13.5.1, it shall forthwith pay such excess to the Contractor.

13.5.3 The Owner may deduct any amount due under this paragraph from any monies that may be due or payable to the Contractor on any account whatsoever. The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or other right that may be available to the Owner.

GC 13.6 DAMAGES AND MUTUAL RESPONSIBILITY

13.6.1 If either party to the Contract should suffer damage in any manner because of any wrongful act or neglect of the other party or of anyone for whom the other party is responsible in law, then that party shall be reimbursed by the other party for such damage. The reimbursing party shall be subrogated to the rights of the other party in respect of such wrongful act or neglect if it be that of a third party.

- 13.6.2 Claims for damage under paragraph 13.6.1 shall be made in writing to the party liable within reasonable time after the first observance of such damage and if undisputed shall be confirmed by Change Order. Disputed claims shall be resolved as set out in Part 8 for the General Conditions – DISPUTE RESOLUTION.
- 13.6.3 If the Contractor has caused damage to the work of another contractor on the Project, the Contractor agrees upon due notice to settle with the other contractor by negotiation or arbitration. If the other contractor makes a claim against the Owner on account of damage alleged to have been so sustained, the Owner shall notify the Contractor and may require the Contractor to defend the action at the Contractor's expense. The Contractor shall satisfy a final order or judgement against the Owner and pay the costs incurred by the Owner arising from such action.
- 13.6.4 If the Contractor becomes liable to pay or satisfy a final order, judgment, or award against the Owner, then the Contractor, upon undertaking to indemnify the Owner against any and all liability for costs, shall have the right to appeal in the name of the Owner such final order or judgment to any and all courts of competent jurisdiction.

GC 13.7 RIGHT OF SET-OFF

- 13.7.1 The Owner has the right to set-off against the balance due or to become due to the Contractor under the Contract, any reasonable and substantiated amounts due or to become due from the Contractor to the Owner under the Contract.

GC 13.8 SOFTWARE

- 13.8.1 Without limiting the generality of any other provision in the Contract, the Contractor, as a part of the Work, shall supply and install all software required by the Contract Documents or included with any systems required by the Contract Documents ("Software"). The Contractor shall grant or obtain a perpetual, irrevocable non-exclusive royalty-free license to use the Software sufficient for the Owner's purposes."

**Regional Municipality of Peel Document 2020-546P
Procurement Division CONSTRUCTION SERVICES FOR LOCALIZED
INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE
FACILITIES WITHIN THE REGION OF PEEL**

AGREEMENT TO BOND

We, the undersigned, hereby agree to become bound as Surety for

In a Performance Bond totalling **50 per cent** of the Contract amount and a Labour and Material Payment Bond totalling **50 per cent** of the Contract amount, substantially in the forms required under the *Construction Act* and conforming to the Instruments of Contract attached hereto, for the full and due performance of the Works shown as described herein, if the Proposal for

is accepted by the Owner.

It is a condition of the Contract that if the above-mentioned Proposal is accepted by the Agency, application for a Performance Bond and a Labour and Material Payment Bond, each in the amount of **50 per cent** of the Contract amount, and each substantially in the forms prescribed by the *Construction Act*, must be completed with the undersigned within 7 days of acceptance of Proposal related thereto, otherwise this Agreement shall be null and void.

Dated this _____ day of _____, _____.

Name of Bonding Company

Signature of Authorized Person Signing
for Bonding Company (Company Seal)

Position

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.3 Comply with the requirements of GC4.1, Cash Allowances and GC4.2, Contingency Allowance of the General Conditions of the Stipulated Price Contract CCD-2, 2008 and as amended, if applicable, in the Supplementary Conditions.
- 1.2 **Section Includes**
- 1.2.1 Applications for Payment.
- 1.2.2 Cash Allowances.
- 1.2.3 Contingency Allowances.
- 1.2.4 Contract modification procedures.
- 1.2.5 Unit Prices.
- 1.2.6 Separate Prices.
- 1.3 **Applications for Payment**
- 1.3.1 The Contractor must submit the schedule of values one week after Contract award. The schedule of values is to be reviewed and approved by the Consultant and the Agency
- 1.3.2 The schedule of values must drill down to level 4 of the Work Breakdown structure (WBS)
- 1.3.3 By the first day of the month following Work complete, submit to Consultant a draft copy of Application for Payment. Include breakdowns as per the approved schedule of values.
- 1.3.4 Following review of draft and no later than the fifth of the month, submit to Consultant one original of final "Proper Invoice" as defined in the General and Supplementary conditions and accompanied with
- 1.3.4.1 Schedule of values showing percentage of work completed
- 1.3.4.2 A detailed updated construction schedule Include showing the beginning and end of the approved baseline schedule and the updated beginning and end dates according to the progress of work.
- 1.3.4.3 A summary of all proposed changes, change orders, and change directives completed and invoiced.
- 1.3.4.4 Subtrades and Subconsultants invoices, with values blacked out
- 1.3.4.5 Bill of landing of materials.
- 1.3.4.6 Subtrade bonds
- 1.3.4.7 Inspections and testing results
- 1.3.4 The Consultant will prepare a Certificate of Payment and submit same to the Agency not later than 7 calendar days after the final form of application for payment has been received.
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- 1.3.5 When a product or system has been incorporated into the work but has not yet been commissioned and/or verified fully operational, the contractor shall only be entitled to claim for up to 90% of the contract value of this product or system.
 - 1.3.6 For the certification of substantial performance, the commissioning and verification of the work has to be successfully completed and all required supporting documents to demonstrate that must be provided.
 - 1.3.7 Application for payment of Holdbacks including the warranty security must be accompanied by a "release letter" in accordance to the Agency format.

1.4 **Cash Allowances**

- 1.4.1 Purchases from Cash Allowances must be authorized by written instructions issued by the Consultant; and the form and method of accounting for costs shall be agreed to by the Consultant and the Contractor before proceeding with the purchase.
- 1.4.2 Contractor will procure, coordinate and manage the vendors that will execute work under cash allowances
- 1.4.3 Cash Allowances will not be subjected to any Contractor mark-up.
- 1.4.4 Harmonized Sales Tax is not included in Cash Allowances.

1.5 **Contingency Allowances**

- 1.5.1 Harmonized Sales Tax is not included in Contingency Allowances.
- 1.5.2 Contractor shall include in the Total Price Bid a Contingency Allowance in the amount that is listed on the Pricing Sheet.
- 1.5.3 Contractor will be entitled to markup on expenditures from the Contingency Allowance.

1.6 **Contract Modification Procedures**

- 1.6.1 The measurement of variations to the Contract Price shall be on the basis of the unit prices submitted. Where this is not possible the measurement will be on the basis of units of material and labour, estimated by the Contractor and evaluated by the Consultant.
- 1.6.2 Once a Proposed Change has been issued by the Consultant, it shall be the responsibility of the Contractor to ensure that no work is carried out that may increase the cost of the variation contemplated.
- 1.6.3 The Consultant will assess the cost of each change before issuing a Change Order. Assist the Consultant with this task by quoting all variations in a complete manner (backup information shall be provided) listing:
 - .1 Quantity of each material,
 - .2 Unit cost of each material,
 - .3 Man hours involved,
 - .4 Cost per hour,
 - .5 Subcontractor quotations,
 - .6 Mark-up.

- 1.6.4 The Consultant may require further quotations in order to show a breakdown of costs.
- 1.6.5 The Agency and the Consultant will not be responsible for delays to the Work resulting from late, incomplete or inadequately broken down valuations submitted by the Contractor.
- 1.6.6 Minor variations may be made in the project from time to time as approved by the Consultant. Such alterations or adjustments shall not constitute a change in cost unless a request is made at the time. No extra will be contemplated except where a clear indication is made that extra payment is claimed, in which case a Proposed Change or Change Directive will be issued by the Consultant. Unless this procedure is followed, no claims for extras will be allowed.
- 1.6.7 Allowable mark-ups on changes in the Work will be subject to the following schedule.
 - .1 The Contractor on work of his own forces:
 - .1 on extras: ten (10) percent (%) overhead, five (5)% profit;
 - .2 on credits: no mark-up.
 - .2 The Contractor on work of the Subcontractors:
 - .1 on extras: ten (10)% overhead;
 - .2 on credits: no mark-up.
 - .3 Mechanical and Electrical Subcontractors:
 - .1 on extras: ten (10)% overhead, five (5)% profit;
 - .2 on credits: no mark-up.
 - .4 All other Subcontractors:
 - .1 on extras: ten (10)% overhead, five (5)% profit;
 - .2 on credits: no mark-up.

1.7 Unit Prices

- 1.7.1 Provide unit prices for items listed on Pricing Sheet.
- 1.7.2 Unit prices include all materials and labour, but do not include Value Added Taxes, overhead or profit. They represent the cost to the Contractor for each operation quoted.
- 1.7.3 The Agency reserves the right to examine the unit prices and to require modification should they appear to be unfair or inaccurate.
- 1.7.4 When requested, submit additional unit prices prior to the first payment under the Contract. The Consultant reserves the right to amend these additional unit prices should they appear to be unfair or incorrect.
- 1.7.5 The unit prices shall be subject to the mark-up schedule described above (see 1.6.7) when used for the valuation of changes.

1.8 Separate Prices

- 1.8.1 Provide separate prices for items listed on the Pricing Sheet.
- 1.8.2 Separate prices include all materials and labour, but do not include Value Added Taxes, overhead or profit.
- 1.8.3 Unless incorporated by written agreement prior to the execution of

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the Agreement, Separate Prices are not included in the Contract Price.

2 **PRODUCTS** – NOT APPLICABLE.

3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

1 **GENERAL**

1.1 **Instructions**

- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.

1.2 **Definitions**

- 1.2.1 The word "Agency", where used in these Documents, shall mean:
Regional Municipality of Peel
10 Peel Centre Drive
Brampton, ON, L6T 4B9
- 1.2.2 The word "Consultant", as specified in the General Conditions of the Contract, shall mean:
Green Propeller Design Inc.
336 Bronte Street South, Unit 29
Milton, Ontario, L9T 7W6

1.3 **Summary of Work**

1.3.1 **Building Descriptions and Information**

- .1 Malton Village:
Malton Village is a three-storey Long Term Care Facility located at 7075 Rexwood Drive in Mississauga. The 160-bed facility was constructed in 2003.
- .2 Tall Pines:
Tall Pines is a three-storey Long Term Care Facility located at 1001 Peter Robertson Boulevard in Brampton. The 160-bed facility was constructed in 2003.
- .3 Sheridan Villa:
Sheridan Villa is a four-storey Long Term Care Facility located at 2460 Truscott Drive in Mississauga. The 142-bed facility was constructed in 1971 and renovated in 2010.
- 1.3.2 As the facilities are occupied, the Contractor is required to hoard off the renovation spaces to prevent access to / from other parts of the building. Access to the work area will be designated by the building operations team. A construction staging plan is to be provided two weeks after pre-construction meeting for review and approval by the Consultant and the Agency
- 1.3.3 If building systems are to be disrupted, forty-eight (48) hours-notice must be given to the Building Facility operations team. Project Manager to coordinate with building supervisor. It may be necessary to take systems down for a short period, which may be acceptable to the ongoing use of the building. If a shutdown is required that will disrupt ongoing operations this will have to be done during nighttime hours.
- 1.3.4 Building critical systems may not be disrupted at any time.

1.4 **Scope of Work**

1.4.1 **Scope 1: Door Repairs at Malton Village LTC**

This project includes replacement of closet doors, and maintenance of washroom doors in all resident's rooms at Malton Village.

- .1 Scope Includes:
 - .1 Replace existing closet door panels with new doors.
 - .2 Replace sliding door hardware for closets with new, as per Section 08 70 00, Hardware specification.
 - .3 Lubricate all rollers / ball-bearings on the sliding door hardware of all the washroom doors.
 - .4 Replace hanger body for washroom doors on an as-needed basis.
- .2 Access to the Work Area:
 - .1 As the building is occupied, the Contractor is required to make arrangements for access to each resident room through the Facility Manager. Access to the work area will be designated by the building operations team. Contractor will have access to perform the Work simultaneously in three rooms (three to five beds) per day. Contractor could work simultaneously on two floors of the same tower. A maximum of two crews will be allowed in the building.

1.4.2 **Scope 2: Staff Room Renovation at Malton Village**

- .1 Scope Includes:
 - .1 Renovation of the second floor Staff Room, including relocation of the Computer Room and kitchenette.
 - .2 Removal of existing rubber flooring, new sheet vinyl flooring, partial ceiling demolition, new ceiling, painting and all associated mechanical and electrical work.
 - .3 New kitchenette millwork and all mechanical and electrical work.
 - .4 Relocation of existing Rain Water Leader.
- .2 Access to the Work Area:
 - .1 As agreed upon by the Facility Manager.

1.4.3 **Scope 3: Kitchen Flooring at Malton Village**

- .1 Scope Includes:
 - .1 Removal of all existing flooring at basement kitchen and ancillary rooms. Sheet vinyl except at compressor room (epoxy), dishwashing area (epoxy), office (rubber).
 - .2 New polyurethane flooring and drain caps at basement kitchen, dishwashing area and auxiliary rooms (refrigerators, office, janitor, compressor room and storage rooms), including replacement of one kettle, stainless-steel exhaust trim and new hand sink.
 - .3 New concrete sealer at basement kitchen freezer.

- .4 Removal and infill of existing trench drain, new trench drain and equipment relocations including exhaust hood suppression modifications.
- .5 Temporary removal, cleaning and storage of all kitchen equipment.
- .6 Disconnection and reconnection of gas, water, power and drains to all equipment and fixtures.
- .7 Provide temporary kitchen facilities, including kitchen, fridge and freezer trailers rentals, modifications, certification, delivery, setup, temporary power and water connections for the temporary kitchen trailers and coordination.
 - .1 The Rental of the trailer will be covered by the Cash Allowance.
 - .2 All other associated costs are to be included in the base contract price.
- .8 Temporary stairs and scaffolding deck, ramp and covered walkway at temporary kitchen facilities.
- .9 Remove, move to storage, and reinstate the racks and cabinets.
- .2 Access to the Work Area:
 - .1 As agreed upon by the Facility Manager.

1.4.4 **Scope 4: Exit Ramps at Malton Village**

- .1 Scope Includes:
 - .1 Sidewalks at five (5) exits to be partially removed and replaced with new sidewalks, complete with curbs, handrails and frost protection to provide barrier-free access.
 - .2 New door hold opens and thresholds.
 - .3 Modification to the existing lawn sprinkler system.
- .2 Access to the Work Area:
 - .1 As agreed upon by the Facility Manager.

1.4.5 **Scope 5: Door Repairs at Tall Pines LTC**

This project includes replacement of closet doors, and maintenance of washroom doors in all resident's rooms at Tall Pines.

- .1 Scope Includes:
 - .1 Replace existing closet door panels with new doors.
 - .2 Replace sliding door hardware for closets with new, as Per Section 08 70 00, Hardware specification.
 - .3 Lubricate all rollers / ball-bearings on the sliding door hardware of all the washroom doors.
 - .4 Replace hanger body for washroom doors on an as-needed basis.
- .2 Access to the Work Area:
 - .1 As the building is occupied, the Contractor is required to make arrangements for access to each resident room

through the Facility Manager. Access to the work area will be designated by the building operations team. Contractor will have access to perform the Work simultaneously in three rooms (three to five beds) per day. Contractor could work simultaneously on two floors of the same tower. A maximum of two crews will be allowed in the building.

1.4.6 **Scope 6: Epoxy and Polyurethane Flooring at Tall Pines**

- .1 Scope Includes:
 - .1 New waterproof polyurethane flooring and drain caps at the Mechanical Room, Penthouse Mechanical and Chiller Room, including associated mechanical and electrical work.
 - .2 Removal of existing epoxy flooring.
- .2 Access to the Work Area:
 - .1 As agreed upon by the Facility Manager.

1.4.7 **Scope 7: Serveries Flooring at Sheridan Villa**

- .1 Scope Includes:
 - .1 New epoxy flooring with waterproof membrane and new drain caps, decommissioning of the existing dishwasher, including sink table and exhaust hood, new exhaust and optional electrical outlet.
 - .2 Removal of existing sheet vinyl flooring.
 - .2 Scope to include the disconnection, removal, cleaning, storage, reinstatement and reconnection of all kitchen equipment and millwork.
- .2 Access to the Work Area:
 - .1 As agreed upon by the Facility Manager.

1.5 **Examination of the Site**

- 1.5.1 No claims for extra payments will be allowed for extra Work made necessary, or difficulties encountered due to site conditions which were visible upon or reasonably inferable from an examination of the site or existing Drawings and Specifications as made available prior to Bid closing.

1.6 **Signage**

- 1.6.1 Individual trades may not display advertising on the site.

1.7 **Shop Drawings**

- 1.7.1 Shop Drawings by each Trade are required to take into account Work of other Trades. In the event of conflict between Shop Drawings and resulting Work by any Trades, it shall be the responsibility of the Contractor to solve the conflict at no additional cost to the Agency.
- 1.7.2 All Shop Drawings must be reviewed by each particular Trade and

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- stamped before submission to the Contractor.
- 1.7.3 All Shop Drawings must indicate the following information:
- .1 Name, Address, Phone and Fax Number of the Supplier.
 - .2 Name of Contact Person.
 - .3 Identification of Trade Section to which it applies.
- 1.7.4 The Contractor must in turn review and stamp all Shop Drawings before submission to the Consultant.
- 1.7.5 Shop Drawings that have not been reviewed and stamped by both the Trade and the Contractor prior to submission will be returned promptly without being reviewed by the Consultant.
- 1.7.6 Shop Drawings must be prepared in the similar measurement system as to the Contract Documents (i.e. metric Shop Drawings for metric Documents and imperial Shop Drawings for imperial Documents).
- 1.7.7 This review is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the reviewer approves the detail design inherent in the Shop Drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of this for efforts or omissions in the Shop Drawings or of their responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of the Work of all Trades.
- 1.7.8 Submittal Procedures:
- .1 Submit Shop Drawings, Product Data and Samples to:
Green Propeller Design Inc.
336 Bronte Street South, Unit 29
Milton, ON, L9T 7W6
 - .2 At the commencement of the Work, the Contractor and the Consultant shall prepare, for the joint review and acceptance by the Consultant and the Contractor, a schedule of the dates for the submission and return of Shop Drawings and other submittals where called for in the Specifications (which in no event will be more than ten working days following submission and ten working days following any resubmission or such other period as may mutually agree upon by the Contractor and Consultant) in order that there is no impact on the construction schedule.
 - .3 The Shop Drawing and other submittals schedule shall provide for the submission of Shop Drawings and other submittals in an orderly sequence and sufficiently in advance to allow for the Consultant's proper review and so as to cause no delay to the Work. If at any time the Contractor submits an unusually large number of Shop Drawings and other submittals not contemplated by the schedule, such that the Consultant cannot process these within the time permitted in

the schedule, the Consultant will, within five working days of receipt of such Drawings and other submittals, provide the Contractor with an estimate of time necessary for processing such Shop Drawings and other submittals.

- .4 The Contractor shall periodically resubmit the schedule to correspond to any changes in the construction schedule for the joint review and acceptance by the Consultant and the Contractor.
- .5 Submit three originals of Shop Drawings.
- .6 Consultant will mark up, in red, all three originals: one will be retained by the Consultant, two will be returned to the Contractor.
- .7 The Contractor will be responsible for reproducing and distributing all copies to their trades and suppliers.
- .8 If submissions are sent electronically, they will be returned electronically, with no hard copies.
- .9 Any additional red marked copies required by the Contractor or trades will be the responsibility of the Contractor.

1.8 **Sample Installation and Mock-Up**

1.8.1 Procedures: Where sample installations or mock-ups are required, comply with requirements of relevant Specification Section.

1.8.2 Sample Installations

- .1 Definition: A Partial Installation of Selected Materials For Consultant's Approval Of Quality Or Work And Visual Acceptance of Materials.
- .2 Construct sample installations prior to pre-installation meetings.
- .3 Maintain sample installations during construction as a standard for Work.
- .4 Properly finished and maintained sample installations may be incorporated into Work.

1.8.3 Mock-Ups

- .1 Definition: A Sample Panel Specially Erected Near Project Site Or, Upon the Consultant's Approval or Direction, At A Remote Location That Incorporates Several Specified Materials.
- .2 Construct mock-ups prior to ordering final materials.
- .3 Mock-ups display colour range, texture, bond, mortar colour and quality of Work expected of materials incorporated in Work.
- .4 A mock-up is required of one fully assembled and working closet door set complete with hardware as specified.
- .5 Mock-ups will be used by Consultant for final material selection.
- .6 Maintain approved mock-ups in good condition until completion of relevant Work and use as standard for Work.
- .7 Remove mock-ups from project site at completion of Project.

1.9 **Alterations to Existing Work**

- 1.9.1 Where materials are to be removed for re-use or where existing finishes are to be cut out and later made good, qualified trades people skilled in the handling of each particular material shall be employed.
- 1.9.2 Damage to the existing building components or contents due to construction Work shall be made good. New Work in existing building shall conform to requirements of applicable trade sections.
- 1.9.3 All services affected by Work shall be cut off and properly capped or diverted. Interruption of services to or within existing building shall not take place without prior consultation with Agency.

1.10 **Cutting and Patching**

- 1.10.1 Cutting, patching and provision of openings, shall be done by the trades who have training and experience with the type of construction and finishes involved, at the expense of the Trade requiring the cutting or patching. The trade requiring the cutting or patching shall be responsible for layout of the required cutting in a timely manner.
- .1 Concrete Coring: Each trade requiring new penetrations of floors, walls, and ceilings is responsible to engage a Coring Contractor under their scope of Work.
- 1.10.2 The expression "make good" refers to repair and restoration of new and existing Work where applicable.

1.11 **Fire Protection**

- 1.11.1 These procedures shall be followed to minimize the possibility of fire and hazards due to fire during construction.
- 1.11.2 **Access to Fire Extinguishing Equipment and Exits**
- .1 Provide and maintain free access at all times from the street to fire hydrants and to outside connections for standpipes or other fire extinguishing equipment whether permanent or temporary. Do not place material or construction equipment within three (3) metres of hydrants or connection, nor between them and centre line of the street.
- .2 Maintain free access at all times to control valves and hose on fire lines within building and to all portable extinguishers.
- 1.11.3 **Rubbish**
- .1 Remove flammable rubbish promptly from the premises. If removal is unavoidably delayed reduce fire hazards by wetting down. Disposal of waste material by burning on or near the premises is not permitted.
- .2 Clean up and remove rubbish into containers. Removal of containers and disposal off the site including all dumping fees will be the responsibility of the Contractor.

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- 1.12 **Powder Activated Fasteners**
- 1.12.1 Powder activated fastenings shall not be used on any portion of the Work unless approval for a specific use is obtained from the Consultant.
- 1.13 **Load Bearing Members**
- 1.13.1 Load bearing members shall not be cut, bored or sleeved without written approval of the Consultant. All cuts shall be made with clean, true and smooth edges.
- 1.14 **Relation to Other Trades**
- 1.14.1 The Contractor shall ensure that all Trades leave chases, slots and reglets required by other Trades and build in frames, sleeves, anchors, bolts, etc. and provide cutting and making good as required. Trades supplying materials for installation on the project shall supply templates and information for their proper locations.
- 1.15 **Codes, Fees, Permits and Certificates**
- 1.15.1 All Work shall be executed and all materials shall conform to and be inspected in strict accordance with all the laws, rules, and regulations of the local and provincial codes and all other authorities having jurisdiction.
- 1.15.2 In the event that material and/or systems specified do not meet these conditions, the Contractor shall bring it to the attention of the Consultant, in writing, before ordering or installing same.
- 1.15.3 If Contractor chooses to carry out Work in contravention of any Code or By-law, he shall be responsible for all changes required to obtain Code acceptance.
- 1.15.4 The Contractor shall obtain all necessary permits at no cost to the Agency (with exception of Building Permit, which will be paid by the Agency), and all notices, pay all fees in order that the Work hereinafter specified may be carried out and he shall furnish any certificates necessary as evidence that the Work installed conforms with the laws and regulations of all authorities having jurisdiction before final certificates are issued.
- 1.15.5 Building permit will be obtained by the Consultant and will be provided to the Contractor. The contractor will be responsible for closing the permit with the city.
- 1.15.6 All equipment supplied must have approval of Canadian Standards Association (C.S.A.), Underwriters Laboratories of Canada (U.L.C.), National Fire Protection Association (N.F.P.A.), Factory Mutual (F.M.), and any other authority having jurisdiction.
- 1.16 **Workplace Hazardous Materials Information System (WHMIS)**
- 1.16.1 The Contractor and all their Subcontractors shall be trained in WHMIS and be able to submit proof of training if requested by the Consultant. The Contractor shall have Material Safety Data Sheets (MSDS) in their site office for all materials of all trades being used
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All Trades

- on the site.
- 2 **PRODUCTS** – NOT APPLICABLE.
- 3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

1 GENERAL**1.1 Instructions**

- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.

1.2 Work Included

- 1.2.1 Provide for all requirements related to setting out, co-ordination, administration, general construction, safety and protection of the Work, workers, Agency's personnel and the public, the ongoing and final cleaning, and any other Work specified or indicated on the Drawings.
- 1.2.2 **Contractor to comply with Ontario's safety requirements for COVID-19. Please visit the following site for requirements:**
<https://www.ontario.ca/page/construction-site-health-and-safety-during-covid-19>
- 1.2.3 Contractor shall execute the project with strict compliance to the CSA-Z317.13-17 – Infection Control During Construction, Renovation and Maintenance of Health Care Facilities standard.
- 1.2.4 A site supervisor competent and authorized to make decisions, address concerns, provide timely information, ensure that all construction personnel follows the safety, site security, code of conduct and infection control requirements is to be present on site at all times Work is being performed and including after hour work. The site supervisor should be accessible via email and cell phone.
- 1.2.5 Be aware that the breakdown of the specification into sections does not represent any actual division of the Work. Be responsible for coordination between items of Work which would be covered under separate specification sections. Coordinate and be responsible for the Work of the various trades.
- 1.2.6 Refer to Section 01 35 33, Infection Control Procedures, for environmental requirements during construction. Control execution of all Work to minimize interference of occupants' use of the building. Be responsible for worker's activities while on site.
- 1.2.7 Conform to all By-Laws and all Legislated requirements including those related to labour, noise and the environment.
- 1.2.8 Maintain at the job site one copy, including all amendments, of each of the following:
 - .1 Contract Drawings and specifications.
 - .2 Site Visit Reports issued by Consultant.
 - .3 Additional Drawings issued by Consultant.
 - .4 Contemplated Change Orders and Change Orders.
 - .5 Material Test Reports.
 - .6 Accurate daily records of all work performed, weather and labour force.

- .7 Manufacturer's specifications for all products to be used.
 - .8 Proof of WHMIS training for all site personnel.
 - .9 Product data sheets to meet the WHMIS requirements.
 - .10 Occupational Health and Safety Act and Site Specific Safety Plan.
- 1.2.9 Notify all staff and Sub-contractors that the Contractor is entirely responsible for site safety. No actions or lack of action by the Agency or Consultant shall be deemed to be an instruction related to safety of the workplace.
 - 1.2.10 Drawings are, in part, diagrammatic and are intended to convey the scope of work and indicate general and approximate locations and arrangement of work. Obtain more accurate information about locations, arrangements and sizes from actual conditions on site.
 - 1.2.11 When site conditions require reasonable changes to the Drawings, obtain the Consultant's approval prior to making such changes.
- 1.3 **Quality Assurance**
- 1.3.1 Make all measurements required to perform the Work. Determine site dimensions and levels so that all new Work is installed to correct sizes.
 - 1.3.2 All Work shall meet or exceed the more stringent of the manufacturer's requirements or the requirements of this Specification.
- 1.4 **Warranty Corrections**
- 1.4.1 Upon notification of defects in Products or services under an Extended Warranty, remedy any defect identified by the Agency during the Extended Warranty period.
 - 1.4.2 Remedy any damage to Agency-owned or controlled real or personal property, when such damage is the direct result of any defect of Products, workmanship, or design furnished.
 - 1.4.3 Commence repairs and replacements within five (5) Working Days of notification of defect unless a shorter response time is specified elsewhere in the Contract Documents.
 - 1.4.4 Supplier's/Manufacturer's standard disclaimers and limitations on Product and services warranties shall not relieve the warrantor of their obligations required under the specific Extended Warranty.
 - 1.4.5 At beginning of the 12th month after Substantial Performance of the Contract, the Agency, Contractor and Consultant, along with key Subcontractors as designated by the Consultant, will carry out a complete inspection of the work and its systems to determine which deficiencies are to be rectified under warranty.
 - 1.4.6 Prior to completion of the warranty period, arrange with the Consultant (minimum two weeks in advance of planned inspection) to carry out complete review of defects and deficiencies which have been observed during the warranty period to determine which are to be corrected.

- 1.5 **Contractor Staging Area**
- 1.5.1 Contractor must submit a construction staging plan for review and approval by the Consultant and the Agency two weeks after pre-construction meeting. No mobilization will be permitted without approved staging plan.
- 1.5.2 All cutting, planing, preparation work is to be completed in the designated staging area at the loading dock. A room will be provided where the work can be carried out. No dusty work is permitted within the resident rooms.
- 1.6 **Permits and Fees**
- 1.6.1 Expedite obtaining all permits that are required (with the exception of the building permit).
- 1.7 **Notice of Project**
- 1.7.1 Submit to the Ministry of Labour a Notice of Project indicating the project start date.
- 1.8 **Schedule**
- 1.8.1 A schedule prepared in industry standard software program such as Microsoft 'Project' must be submitted by the Contractor to the Agency prior to the execution of the Contract.
1. The schedule shall include all details required to successfully deliver the Project. The Contractor shall make their own determination as to the sequence of the below items; the list is not intended to restrict the Contractor, but rather to be coordinated with the milestone dates listed elsewhere in these documents.
- .1 Identification of critical path, predecessors, successors activities, lags (negative and positive) floats, merge bias, constraints (hard and preferential).
- .2 Project Kick-off Meetings with Agency
- .3 Preparation and submission of Documents to Agency
- .4 Submission of shop drawings and samples
- .5 Order and delivery of materials and equipment
- .6 Mobilizing to each site
- .7 Demolition
- .8 List relevant construction activities for each scope
- .9 Commissioning
- .10 Substantial Completion
- .11 Project Closeout/Demobilization
- .12 Final Completion of Contract
2. The schedule must show a detailed breakdown of the Work indicating sequence of systems; milestones, and critical dates. The schedule must include the Contractor's reasonable expectations for delivery times and long-delivery items. The Agency will expect the Work to proceed in accordance with the approved schedule.
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- 1.8.2 The staging of Work shall be scheduled to minimize disruption of the facilities operation.
- 1.8.3 For Scope 1 and Scope 5 (Door Repairs): Contractor will have access to perform the Work simultaneously in three rooms (three to five beds) per day. Contractor can work simultaneously on two floors of the same tower. Resident Rooms will be identified by Staff for one work week in advance. A maximum of two crews will be permitted to work in each building at any one time. In the case where a scheduled resident room cannot be accessed, the Contractor will arrange with the Facility a back-up room to continue the Work.
- 1.8.4 Monitor compliance with the Contract schedule on an ongoing basis. All sites will have an independent critical path schedule.
- 1.8.5 At no time shall the size of the work crew be decreased from the size indicated on the project schedule.
- 1.8.6 Updated schedule shall be provided ahead of each construction meeting at each location
- 1.8.7 For work requiring access to residents rooms the Contractor must provide a week ahead schedule every Friday detailing the rooms for which work is schedule the following week.

1.9 **Submittals**

- 1.9.1 Two weeks ahead of mobilization, the Contractor is to provide the Certificate of the Site Supervisor training in Infection Prevention and Control in accordance with the CAN/CSA Z317.13.17.

1.10 **Project Meetings**

- 1.10.1 Schedule and hold pre-construction, progress and pre-installation meetings throughout construction of Work.
- 1.10.2 Pre-Construction Meeting
 - .1 Attend pre-construction meetings, to be held prior to commencement of Work at place and time to be announced by Consultant.
 - .2 Agenda: Project co-ordination, administrative procedures, scheduling and other related subjects.
- 1.10.3 Progress Meetings
 - .1 Schedule and administer weekly or bi-weekly progress meetings until Substantial Completion.
 - .2 Make physical arrangements, prepare agenda, and distribute notice of each meeting to participants, and to Consultant three days in advance of meeting date.
 - .3 The Contractor shall preside at meetings, record minutes, and distribute copies to participants and to entities affected by decisions at meetings within five working days.
 - .4 Locations of meetings: Project site office or other acceptable location.
 - .5 Minimum Agenda:
 - .1 Approval of minutes of previous meetings.
 - .2 Review of Work progress.

- .3 Field observations, problems and decisions.
 - .4 Identification of problems, which impede planned progress.
 - .5 Review of Submittal Schedule and status of submittals.
 - .6 Review of off-site fabrication and delivery schedules.
 - .7 Maintenance of Progress Schedule.
 - .8 Corrective measures to regain projected schedules.
 - .9 Planned progress during succeeding Work period.
 - .10 Co-ordination of projected progress.
 - .11 Maintenance of quality and Work standards.
 - .12 Effect of proposed changes on Progress Schedule and co-ordination.
 - .13 Other business relation to the Work.
- 1.10.4 Pre-Installation Meetings
- .1 Where required by the specifications or when deemed appropriate by the Contractor, hold pre-installation meetings with members of relevant trades involved to discuss installation of specific building products or elements.
- 1.10.5 Attendance at Meetings
- .1 Contractor, job superintendent, trades, and suppliers as appropriate to agenda, and authorized to act on behalf of the entity each represents; Agency, Consultant, Professional consultants and others may attend as appropriate.
- 1.11 **Parking**
- 1.11.1 Comply with local parking regulations.
- 1.12 **Traffic Control**
- 1.12.1 Protect permanent site improvements to remain such as curbs, pavement and utilities.
 - 1.12.2 Maintain access for fire-fighting equipment and access to fire hydrants.
- 1.13 **Security**
- 1.13.1 Protect and secure work area, materials and equipment from theft, vandalism and unauthorized entry.
- 1.14 **Occupancy of Building during Construction**
- 1.14.1 The building will be occupied throughout construction. Refer to Appendix – Guidelines for Maintaining Fire Safety During Construction in Existing Buildings.
- 1.15 **Construction Review**
- 1.15.1 The Contractor shall notify the Consultant and inspection and testing agents not less than 48 hours prior to each part of work being ready for review or testing. Work which requires review or testing shall not be performed on weekends or holidays unless previously agreed to.

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- 1.15.2 The Contractor shall be responsible for payment of costs if the Work is not ready when stated and if the Consultant and inspection and testing agency are not given sufficient notice of such delay.
- 1.15.3 The Agency reserves the right to deduct from the Contractor amounts for extra inspection and testing by the Consultant as required for certification of payment of work done to repair a deficiency.
- 1.16 **Temporary Facilities**
- 1.16.1 Provide a means of direct communication with the site to permit continuous contact on a daily basis.
- 1.16.2 Provide temporary sanitary facilities and maintain in a sanitary condition. Site facilities shall not be used by the Contractor's forces.
- 1.16.3 Temporary electrical power for hand held equipment will be provided free of charge by the Agency. Arrange and pay for any usage and connection costs required for all other equipment. Do not connect to the building's power supply without written permission of building management.
- 1.16.4 The existing water supply from existing hose bibs at the site may be used free of charge. Any water required in excess of this supply shall be metered and paid for by the Contractor. Be responsible for connecting to the existing services. Do not use fire system without written permission of building management. Advise Building Operations/Property Management of any procedures that may cause fire alarms to activate.
- 1.16.5 With the exception of safety/instruction signs and notices, no signs or advertising shall be permitted on the site or equipment except as authorized by the Agency. Safety/instruction signs and notices shall be posted in accordance with current Code requirements and local and municipal by-laws. Maintain approved signs and notices in good condition for duration of work.
- 1.17 **Protection of Installed Work**
- 1.17.1 Refer to various sections of Specifications for specific requirements regarding protection of installed materials.
- 1.17.2 Provide protective coverings at walls, projections, corners and jambs, sills and soffits of openings in and adjacent to traffic areas.
- 1.17.3 Protect pre-finished Work, including windows, louvers, finish hardware and doors from damage by mortar and other construction materials and operations.
- 1.17.4 Replace or make good, to the satisfaction of the Consultant, any building surface or installed material damaged prior to acceptance by the Agency and/or due to failure to provide suitable protection.
- 1.18 **Fire Protection**
- 1.18.1 Provide and maintain, in good operating condition, adequate fire protection equipment suitable for fire hazards involved at convenient accessible locations during construction.
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1.18.2 Avoid accumulations of combustible forms, form lumber and debris within building and vicinity.

1.18.3 Flammable Liquids

- .1 Store flammable or volatile liquids in open air or in small detached structures or trailers.
- .2 Closely supervise storage of paint materials and other combustible finishing and cleaning products.
- .3 Do not store oily rags in closets or other tight spaces.
- .4 Comply with recommendations regarding fire protection made by representatives of insurance company carrying insurance on the Work or by local fire chief or fire marshal.
- .5 Prohibit smoking in vicinity of hazardous operations.

1.18.4 Contractor to prevent a false fire alarm. Contractor will be required to pay Fire Department costs if false alarm is triggered due to their activities.

1.19 **Housekeeping**

1.19.1 **Garbage Disposal**

- .1 Keep building and site free from accumulations of garbage.
- .2 Remove cartons, crates, wrappings, lunch garbage and other garbage daily.
- .3 Provide dumpsters for each garbage type in accordance with the local regulations.
- .4 Do not burn paper, trash or other material on site.
- .5 Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary sewers.
- .6 Remove salvaged materials from site unless otherwise specified.

1.20 **Environmental Requirements**

1.20.1 Dust Control

- .1 Execute Work by methods to minimize raising dust from construction operations.
- .2 Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- .3 Wipe away all dust.
- .4 Use drop cloths to protect resident belongings during door installation (Scope 1 and Scope 5).

1.20.2 Noise Control:

- .1 All noisy activities are to be performed outside the Resident Home Areas. Should power tools need to be used in the resident room, a suitable time will need to be arranged with the Agency. Such scheduling is to be accounted for in the pricing, and will be discussed and agreed with the Region of Peel.

1.21 **Construction Safety**

1.21.1 The Contractor shall be liable for any costs, fines, penalties, etc.,

levied against the Agency or Consultant due to violation of the *Construction Safety Act* by the Contractor or any of their Subcontractors.

1.21.2 Pursuant to the latest amendments to *Ontario's Occupational Health and Safety Act*, include all cost for management and/or non-management representatives to attend Safety Committee meetings as often as required by legislation.

1.22 **Safety Statement and Program**

1.22.1 The Contractor shall post their Safety Policy Statement on the project and submit to the Consultant a copy of this Safety Program.

1.23 **Infection Control Measures**

1.23.1 Comply with CSA-Z317.13-17 – Infection Control During Construction, Renovation and Maintenance of Health Care Facilities.

1.23.2 For Scope 1 and Scope 5: It is also expected that the following will be adhered to:

- .1 All cutting, sanding, painting and preparation will be done on the loading dock or at the Contractor's location. Storage container can be placed in the loading bay. Receiving area will be available for materials.
- .2 The work within rooms will be just the final installation which will produce minimum amount of dust. For that work, the Contractor will be required to have a portable vacuum and poly/draw sheets to protect the close-by clothing and furniture. Use drop cloth to protect closet contents as well.

1.24 **Documentation of Work**

1.24.1 Contractor is required to take photos of before the Work (existing conditions) and photos of after the Work is completed, and provide the photos as part of their payment application.

1.25 **Emergencies**

1.25.1 In an emergency affecting or threatening the safety of life, the Work or adjoining property, the Agency and Consultant have authority to stop the progress of the Work.

1.25.2 Provide the Agency and Consultant with the name and telephone number of a person that is available and may be contacted during off hours, weekends and holidays in case of emergency.

2 **PRODUCTS** – NOT APPLICABLE.

3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.2 **General Requirements**
- 1.2.1 This Section describes the Health and Safety requirements.
- 1.3 **Constructor**
- 1.3.1 For the purposes of the Contract, the term "Constructor", as defined in the *Occupational Health and Safety Act*, shall mean the Contractor who shall be responsible for ensuring that the provisions of the statutes, regulations and by-laws pertaining to the safe performance of the Work are to be observed. The "Constructor" shall submit the Notice of Project.
- 1.3.2 In the event of conflict between any of the provisions of statutes, regulations and by-laws, and other requirements of authorities, the most stringent provision applies.
- 1.3.3 Contractor's representative shall be responsible for ensuring that the provisions of statutes, regulations and by-laws pertaining to safe performance of the Work and the Work of other Contractors and Agency's own forces working on the Site are observed and that the methods of performing the Work do not endanger the personnel employed thereon and the general public, and are in accordance with the latest edition of the *Occupational Health and Safety Act*. Contractor to include representatives of other Contractors working on site on the Joint Health and Safety Committee.
- 1.3.4 Prior to the Contractor's representative being absent from the Site, the Contractor's representative will name another person, in writing to the Consultant, who is competent to assume these responsibilities. The Contractor shall advise the Consultant of any change in the individual identified as the Contractor's representative.
- 1.4 **Project Responsibilities**
- The Contractor's representative shall ensure that:
- 1.4.1 All measures and procedures prescribed by the following Acts and Regulations are carried out on Site:
- .1 The Occupational Health and Safety Act;
 - .2 The Regulations for Construction Projects;
 - .3 Workplace Hazardous Materials Information System WHMIS Regulations;
 - .4 The Environmental Protection Act and regulations;
 - .5 All other legislation, regulations and standards as applicable.

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- 1.4.2 Every employer and every worker performing Work on the Site must comply with the requirements referred to above.
 - 1.4.3 Ensure that the health and safety of workers, employees of the Agency and the general public are protected in relation to the Work performed on the Site.

1.5 **Workplace Hazardous Materials Information System (WHMIS)**

- 1.5.1 Be familiar with and comply with WHMIS regulations.
- 1.5.2 Properly label controlled products. Provide proper warning labels and training at the Site.
- 1.5.3 Maintain on site for duration of Contract a hazardous materials log containing all required Material Safety Data Sheets (MSDS). Log shall be open for inspection by Agency, Consultant and all personnel on Site.
- 1.5.4 Provide copies of MSDS for any controlled Products prior to delivery to the site.
- 1.5.5 Be responsible for all applicable requirements of the regulations.
- 1.5.6 Before commencing any Work on Site, attend the pre-construction meeting and provide the Consultant with a proposal as to how hazardous materials will be stored and dispensed on Site. In addition, specifically outline the measures which will be undertaken to prevent damage or injury in the event of an accidental spill.
- 1.5.7 Provide "Handling Procedure for Hazardous Materials".

1.6 **Hazardous Substances On-Site**

- 1.6.1 Work at the site may involve contact with hazardous substances. Contractor must ensure compliance with regulatory requirement when coming in contact with them. Contractor must review provided site survey reports and report any discrepancies.
- 1.6.2 While performing the Work the Contractor must report any additional suspected materials to the consultant and the agency and stop work until direction is received.

1.7 **Fire Protection**

- 1.7.1 Provide and maintain temporary fire protection equipment (e.g. portable fire extinguishers) on construction work areas during performance of the Work as required by authorities having jurisdiction, governing codes, regulations and by-laws, to the satisfaction of the Agency and all local and insurance authorities in order to protect the property of the Agency and the Contractor against fire hazards during construction.
- 1.7.2 A fire watch shall be required during any open flame and hot work activities (e.g. soldering and welding) regardless of the number, duration or size of the activity in operation on a single floor.
- 1.7.3 A fire watch shall be required during any shut-down of the buildings' fire alarm, sprinkler or other suppression system.
- 1.7.4 Measures for alternate egress shall be in place during the inaccessibility of any exit due to construction.

1.8 **Joint Health and Safety Committee**

1.8.1 The Contractor shall be responsible for the establishment and operation of the Joint Health and Safety Committee as required by the *Occupational Health and Safety Act*.

1.9 **Deliverables**

- 1.9.1 Upon request the Contractor shall deliver to the Consultant:
- .1 The Contractor's Occupational Health and Safety Policy.
 - .2 The Contractor's safety program to implement the Occupational Health and Safety Policy for the Contract, which will effectively prevent and control accidents for the Contract.
 - .3 A copy of all communications with, and including all orders by, the Ministry of Labour or other occupational health and safety enforcement authority.
 - .4 A copy of all accident/injury investigation reports, not just the WSIB Form 7. Each report must contain a statement of actions that will be taken to prevent a recurrence.
 - .5 A copy of all inspection reports made by the Contractor in compliance with the employer's responsibility under the *Occupational Health and Safety Act*.
 - .6 A copy of all safety information pertaining to the Contract made and furnished by the Contractor's own "Safety Personnel" or outside Consultants/advisers engaged for the purpose of inspecting the workplace for occupational health and safety.
 - .7 A verification that all workers in the employ of the Contractor on Site, have had a WHMIS training or refresher course within the last 12 months.
 - .8 A verification that all workers in the employ of the Contractor have had "Explosive Activated Tool Training" on the type of tools being used.
 - .9 A verification that the instruction manuals are on Site for all tools and equipment being used.
 - .10 A copy of the most recent workers compensation experience rating account, i.e. CAD-7, NEER, and/or an insurance carrier's experience rating account.
 - .11 The immediate reporting to the Consultant and Agency of all instances that are defined in the *Occupational Health and Safety Act* as "Notices of Injuries" and "Occurrences" and any occasion that a worker exercises their "Right to Refuse Unsafe Work".
- 1.9.2 The Contractor shall submit a site-specific Health and Safety Plan within one week after the pre-construction meeting and prior to mobilization on site. The site-specific Health and Safety Plan must address the requirements of the Occupational Health and Safety Act, include but not limited to: hazards identification, safety measurements to address them, emergency procedure response specific for the site and the Work, etc.
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- 1.9.3 During the course of the project, the Contractor is to provide additional safety plan prior to special construction operations such as exit closures, electrical power shutdowns, etc.
 - 1.9.4 One week after pre-construction meeting the Contractor is to provide a staging plan indicating the access routes, storage areas, hording enclosure, and garbage disposal.
 - 1.9.5 The Agency and Consultant reserves the right to require additional or amended deliverables pertaining to safety during the duration of the Work at no additional cost to the Agency.
 - 1.9.6 The Contractor shall submit a phasing plan for areas required to be operational during construction.
 - 1.9.7 Items specified above shall be delivered to the Consultant prior to the Contractor commencing Work on the Site.

1.10 **Due Diligence**

- 1.10.1 The Contractor acknowledges that it has read and understands the measures and procedures relating to occupational health and safety as prescribed above. The Contractor acknowledges and understands its duties as therein set out and hereby expressly undertakes and agrees to comply with all such requirements and standards in their entirety and at the Contractor's expense.
- 1.10.2 The Contractor further agrees to fully cooperate with all health and safety requirements, rules, regulations, standards and criteria set out in the Contract Documents, which agreement is in furtherance of the Contractor's duties and responsibilities under Occupational Health and Safety legislation.
- 1.10.3 The Contractor agrees that if, in the opinion of the Consultant or Agency, the health and safety of a person or persons is endangered or the effective operation of the system put in place to ensure the health and safety of workers on the Site is not being implemented, the Consultant or Agency may take such action as it deems necessary and appropriate in the circumstances, including, without limitation, the following:
 - .1 Require the Contractor to remedy the condition forthwith at its own expense;
 - .2 Require that the Site be shut down in whole or in part until such time as the condition has been remedied;
 - .3 Remedy the problem and the Agency shall back-charge the Contractor for the cost of such remedial work, together with an appropriate overhead factor as determined by the Agency in its sole and absolute discretion; and
 - .4 Terminate the Contract without further liability in the event the Contractor fails to comply with these provisions.
- 1.10.4 If a lien is registered, in respect to any monies held back, back-charged or assessed in accordance with these paragraphs, the Contractor shall consent to an order vacating such registration and shall indemnify the Agency for any and all loss, whereby direct or

consequential which the Agency may sustain as a consequence of such registration.

- 1.11 **Site Safety Personnel**
1.11.1 In the event the Consultant deems it necessary, because of the Work, the Contractor shall assign a “Competent Safety Person” to assist the Contractor's representative in the discharging of safety responsibility, at no additional cost to the Agency.
- 1.12 **Special Requirement For Health Care Facilities**
1.12.1 Comply with CSA-Z317.13-17 – Infection Control During Construction, Renovation and Maintenance of Health Care Facilities.
- 1.13 **Covid-19 Emergency Measures**
1.13.1 **Contractor to comply with Ontario's safety requirements for COVID-19. Please visit the following site for requirements:**
<https://www.ontario.ca/page/construction-site-health-and-safety-during-covid-19>
- 2 **PRODUCTS** – NOT APPLICABLE
- 3 **EXECUTION** – NOT APPLICABLE

END OF SECTION

1 GENERAL**1.1 Instructions**

- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.

1.2 References

- 1.2.1 CSA Z317.13-17 – Infection control during construction, renovation and maintenance of health care facilities.

1.3 Infection Prevention and Control

- 1.3.1 The Contractors working at the Long-Term Care (LTC) facilities in the Region of Peel are obliged to comply with the infection prevention and control guidelines and are required to attend a meeting with representatives from the Agency's Occupational Safety and Facilities Development and Infection Prevention and Control Department prior to start of construction activities.
- 1.3.2 The Contractor shall notify and seek the review and approval of the infection control measurements implemented prior to start of any construction activities.
- 1.3.3 Construction activities in health care facilities present a risk for patients of these facilities. Take measures to prevent and control construction related infections. Plan with the Agency and implement preventive measures throughout duration of the Contract. Educate all construction personnel on-site regarding planned construction activity, location and duration, population risk group to ensure preventive measures are identified, initiated and maintained. Ensure appropriate preventive measures are in place and establish clear line of communication among those involved in this Project.
- 1.3.4 The Contractor shall be aware at all times that ongoing operation and activities of the existing Long Term Care (LTC) facility will continue. The Agency staff may at any given time request that any Work be temporarily ceased without additional cost to the Agency if work is performed in a manner that poses a risk for the residents and staff.
- 1.3.5 Normal concentrations of Aspergillus and other related spores are present in the natural environment and thus are not a risk to healthy construction workers or LTC staff.
- 1.3.6 Aspergillus and related nosocomial (LTC acquired) fungal infections are caused by inhalation by immunocompromised persons of Aspergillus spores or other related spores. The spores are known to be prolifically present in construction dust and debris. Control of construction dust, debris as required in this Section is imperative to help prevent outbreaks of Aspergillus or related nosocomial fungal infections in immunocompromised persons.

- 1.3.7 Inhalation of Aspergillus spores or other fungal spores by immunocompromised persons can lead to serious complications and even death. Infections are caused by inhalation of Aspergillus spores or related spores by immunocompromised persons.
- 1.3.8 Construction activity types are defined by CSA Z317.13-17 (refer to Table 3). Contact the Agency if any issue is questionable under this Standard.
- .1 Scope 1 and Scope 5 (Door Repairs) project is a type B construction activity.
 - .2 Scopes 3, 4, 5, 6, and 7 are type C construction activity.
- 1.3.9 Infection Prevention and Control Measures:
- .1 Initiate, perform and adhere to “Preventive Measure I, II, III and IV” as applicable for the Work in accordance with Article 7 of CSA Z317.13-17.
 - .2 Any deviation/changes to this classification must be approved by the Agency in conjunction with Infection Control and/or Occupational Health and Safety staff.
 - .3 Any other Work required to be performed off site shall be coordinated and evaluated for “Preventive Measure” level with the Agency prior to the Work being performed.

1.4. **Temporary Measures (Does not apply to Scope 1 and Scope 5)**

- 1.4.1 In addition to the above requirements, provide:
- .1 Temporary Ventilation:
 - .1 Provide temporary ventilation system within construction area and adjacent areas to ensure it is functioning properly, before commencing the Work, throughout construction period and at completion. Where possible disable ventilation system in Work area until construction is complete.
 - .2 Assess air flow, air pressure, and air exchange rates as well as examining, cleaning and evaluating integrity of filters and ducts.
 - .3 Cap and seal existing supply, return and exhaust duct openings at construction areas. Cap duct during construction. Immediately seal new ducts added and installed with plastic sheeting (re-seal as required) to minimize entry of dust and/or contaminants into ductwork.
 - .4 Ensure provision for exhaust fan to maintain space under negative pressure. Direct exhaust discharge without interruption to outside as designated by the Agency away from intake vents or filtered through a High Efficiency Particulate Air (HEPA) filter before being re-circulated.
 - .5 As an alternative, provide portable fan/filter unit to maintain space under negative pressure. Unit shall be complete with three stage filtration: ninety nine point ninety nine (99.99) per cent HEPA, 40 per cent pre-filter and 25mm thick fibreglass media prefilter. Fan shall

discharge to suitable location outside the construction zone. Be responsible for replacing filters as required to ensure proper operation. Replace fibreglass pre-filter on daily basis.

- .2 Dust Control:
 - .1 Dust-Down Vestibules: Provide dust down vestibule having a minimum size to suit, sealed to floor and structure above (may be tarped to ceiling if ceiling is tarped), equipped with vacuum, walk-off mats, clothing hooks and lighting, and electricity. Ensure construction side of vestibule is provided with double flap inner end with minimum 0.762mm thick polythene sheet. Provide magnetic doors to suit unless noted otherwise. Provide two 914mm x 2032mm hollow metal doors with pressed steel frame, closer and lock on outer end at Malton Village kitchen scope (Scope #4).
- .3 Temporary Dust Partitions and Dust Barrier Partition Wall between existing building and the Work:
 - .1 Provide temporary dust barrier partitions in work areas and dust barrier partition walls with studs and fully sealed poly tarps or dust barrier system to prevent dust infiltration into adjacent areas during alteration, repairs, and construction.
 - .2 Conform to the Occupational Health and Safety Act and all other pertaining regulations.
 - .3 Conform to infection prevention and control requirements for designated population risk group, geographical area, construction activity type and preventive measures.
 - .4 Conform to Class III & IV, Infection Control Dust Barrier Partition Enclosure as indicated on CSA Z317.13-17, figure A4.
 - .5 Seal edges and joints to achieve positive protection.
 - .6 Remove temporary dust partition and dust barriers promptly when no longer required and make good adjacent surfaces. Hoarding/temporary dust tight partitions are to remain in place unless noted otherwise.
 - .7 Provide temporary dust partitions beyond those required where risk of falling objects exists, to protect the public and the Agency's personnel.
 - .8 Block off supply and return to prevent dust infiltration into adjacent areas during construction.
 - .9 Conform to suit site conditions and subject to review and approval by the Consultant, erect impermeable temporary dust proof partitions from structure including plenum above ceiling to floor using temporary dust partitions and dust barrier partition wall.

- .10 Ensure windows, doors, plumbing penetrations, electrical outlets, and intake and exhaust vents are properly sealed with plastic and taped within construction areas.
- .11 Vacuum Work area with HEPA filtered vacuums daily or more frequently if needed. Vacuum air ducts and spaces above ceiling if necessary.
- .12 Ensure workers wear protective clothing that is removed each time they leave the construction area before going into patient care areas. Ensure all personnel entering construction areas is wearing shoe covers and remove at exit.
- .13 Execute the Work by methods that minimize dust generation from construction activities; wet mop and vacuum as necessary. Provide means to minimize dust migration into atmosphere by using drop sheets, by water misting Work surface before cutting and by placing dust mat at entrance to and exit from Work areas.
- .14 Do not remove temporary dust proof partitions until section of scope is complete and area has been cleaned thoroughly and inspected by the Agency.
- .15 Remove dust barrier carefully to minimize spreading dust and other debris particles associated with construction.
- .16 Maintain construction areas clean and clear of debris throughout Work. Remove debris at end of each day. Erect external chute if construction is not taking place on ground floor level.

1.5 **Infectious Disease Screening**

- 1.5.1 To prevent and control the transmission of infection (particularly communicable diseases) from the Contractors to the population within the LTC facility, the Contractor shall follow the Ministry of Health and Long-Term Care's compliance standards and visitor policy as outlined below:
- .1 The Contractor will self-screen for symptoms of Febrile Respiratory Illness (FRI) using the infection control screening tool available at the reception desk.
 - .2 The Contractor will sign in and out of the building and record their contact information by using the sign in book so the centre can monitor individuals who have entered the building. To stop the spread of infection, the Contractor must use the hand sanitizer when signing in and out as indicated on the sign-in sheet.
 - .3 If FRI symptoms have been identified, the receptionist will contact the Infection Control Practitioner/Program Support Nurse or the Director of Care or the Charge Registered Nurse. The person will be required to leave the premises and not visit the centre until symptom free.

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- .4 If FRI symptoms are not identified, the Contractor can enter the centre for their intend purpose.
 - .5 The Infection Control Practitioner/Program Support Nurse will be advised of all occurrences of FRI symptoms.

1.6 **Covid-19 Emergency Measures**

- 1.6.1 **Contractor to comply with Ontario's safety requirements for COVID-19. Please visit the following site for requirements:**
<https://www.ontario.ca/page/construction-site-health-and-safety-during-covid-19>

2. **PRODUCTS** – NOT APPLICABLE

3. **EXECUTION**

3.1 **Disposal of Demolition Waste**

- 3.1.1 Demolition materials will be disposed of directly to the exterior of the facility.
- 3.1.2 Dust control must be maintained to prevent dust from entering the occupied areas of the building.

3.2 **Materials Handling**

- 3.2.1 Construction materials to be delivered to the Contractor staging area at the loading dock ramp, in a way that ensures that they are not exposed to contaminants or moisture.
- 3.2.2 All materials entering the construction Work area will be clean and dry.
- 3.2.3 Materials that become damaged due to moisture or water infiltration shall be removed, disposed of and replaced with dry and good materials.

END OF SECTION

1 **GENERAL**1.1 **Summary**

1.1.1 This Section lists construction terms and related abbreviations and acronyms that may be used in the Contract Documents.

1.2 **Abbreviations**

ANSI	American Nation Standards Institute
ASTM	American Society for Testing and Materials
AWMAC	Architectural Woodwork Manufacturers Association of Canada
B.U.R.	Built-Up Roofing
CSA	Canadian Standards Association
CGSB	Canadian General Standards Board
CPVC	Chlorinated Polyvinyl Chloride
CSDFMA	Canadian Steel Door and Frame Manufacturers Association
EIFS	Exterior Insulation and Finish System
EIMA	EIFS Industry Members Association
EPDM	Ethylene Propylene Diene Terpolymer
EPS	Expanded Polystyrene
FAT	Factory Applied Tape
F.M.	Factory Mutual
HVAC	Heating, Ventilation and Air Conditioning
LTC	Long Term Care
MSDS	Material Safety Data Sheet
N.F.P.A.	National Fire Protection Association
N.L.G.A.	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
OBC	Ontario Building Code
O.I.R.C.A.	Ontario Industrial Roofing Contractors Association
PVC	Polyvinyl Chloride
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
ULC	Underwriters Laboratories of Canada
VOC	Volatile Organic Compounds

2 **PRODUCTS** – NOT APPLICABLE.

3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Work Included**
- 1.1.1 Work of this Section includes selection and substitution procedures for materials and equipment.
- 1.1.2 Requirements and conditions for substitutions specified in this Section are in addition to provisions in front end sections (Instructions to Bidders and Supplementary Conditions).
- 1.2 **Submittals**
- 1.2.1 Submit specified documentation for substitution requests.
- 1.2.2 Substitution requests must be approved by Consultant and Agency before making submittals required by Section 01 30 00, Instructions to All Trades.
- 1.2.3 Bid prices shall account for specified and approved acceptable products in this Document.
- 1.2.4 No substitution request will be processed before Contract award.
- 1.3 **Quality Control**
- 1.3.1 To greatest extent possible, provide products of same generic kind, from single source, for each unit of Work.
- 1.3.2 If Contractor proposes to use material which, while suitable for the intended use, deviates from requirements of the Contract Documents, Contractor shall inform Consultant in writing of the nature of such deviations when material is submitted for approval, and shall request written approval of deviation from Contract Documents.
- 1.3.3 Intent of Contract Documents:
- .1 Contract Documents are intended to produce Work of consistent character and quality of design.
- .2 Consultant will judge design and appearance of proposed substitutes on the basis of their suitability in relation to overall design of the Project, as well as for intrinsic merits.
- .3 Consultant will not approve as equal to materials specified proposed substitutes which, in Consultant's opinion, would be out of character, obtrusive or otherwise inconsistent with character or quality of design of Project.
- .4 In order to permit coordinated design of color and finishes, Contractor shall, if required by Consultant, furnish substituted material in color, finish, texture or pattern specified for original material, at no additional cost to the Agency.
- 1.3.4 Compatibility of Products: If option of selecting between two or more products exists, provide product compatible with other products previously selected.
- 2 **PRODUCTS**
- 2.1 **Selection Criteria**
- 2.1.1 Proprietary Products:

- .1 Products specified by trade or brand name are part of the Contract.
 - .2 Provide specific materials, equipment, fixtures, apparatus, appliances or other manufactured articles of types and makes specified or indicated, except for substitutions or changes specifically approved in writing by Consultant.
 - .3 When several named products are listed, use any product listed.
- 2.1.2 "Equivalent to" or "Approved Equal": Where one or more products, materials or pieces of equipment are specified by reference to trade or brand name or catalog number and the phrase "equivalent to" or "approved equal" accompanies listing, comply with provisions pertaining to substitutions to obtain acceptance from Consultant for use of unnamed products.
- 2.1.3 Performance Specifications:
- .1 Where products require compliance with indicated performance requirements, and list of acceptable manufacturers is included in Contract Documents, provide products that comply with specific performance requirements indicated from manufacturer listed.
 - .2 If Contractor proposes another product, comply with provisions pertaining to substitutions to obtain Consultant's acceptance of unnamed manufacturer's product.
 - .3 When products are specified only by reference standard, performance criteria or descriptive requirements, without trade names, submit products by any reputable manufacturer meeting or surpassing specified requirements or standard.
- 2.1.4 Visual Matching: Where matching an established sample is required, the Consultant has the final judgment of whether proposed product matches sample.

2.2 **Substitution Proposals**

- 2.2.1 After Contract award, submit substitution proposals to the Consultant if it is shown that the substitution is proposed for one of the following reasons:
- .1 Directly related to an "equivalent to" clause or similar language in Contract Documents.
 - .2 Specified product or method cannot be provided within Contract Time.
 - .3 Specified materials cannot receive approval of local governing authority.
 - .4 Substitute material will offer the Agency substantial advantages in terms of cost, time, energy conservation or other consideration.
 - .5 Specified materials cannot be properly coordinated with other materials in Work.
 - .6 Specified product or material cannot provide warranty required by Contract Documents.

- .7 Specified product or material cannot meet performance requirements specified.
- 2.2.2 Substitution proposals will not be considered if proposed for one of the following reasons:
 - .1 Contractor or Subcontractor has neglected to place an order for materials and labour early enough to conform to construction schedule.
 - .1 Such failure or neglect is not grounds for extension of Contract Time under this Contract; nor will arbitrary substitutions be considered solely to expedite completion.
 - .2 Revision of Contract Documents is required to accommodate substitute product.
 - .3 Substitutions are indicated on Shop Drawing, Product Data or Sample submittals without separate formal request.
 - .4 Substitutions are requested directly by Subcontractor or supplier, without formal request from Contractor.
- 2.2.3 Substitute proposals submitted for consideration on any one Contract element shall be limited to maximum of two with not more than one substitute proposal submittal from any one manufacturer. If two separate substitution proposals are made for a single material and are rejected, provide specified item without further delay.
- 2.2.4 Substitutions for major building elements must be submitted for consideration within a week of Contract execution. Proposals for substitutions of major building elements after that time will not be considered.
- 2.2.5 Consultant will be the judge of equality or superiority for proposed substitutions. Do not purchase or install proposed substitute products without written acceptance of Consultant and by the Agency. Allow minimum of twenty calendar days for Consultant's review of substitution proposals.

2.3 **Substitution Request Submittals**

- 2.3.1 After Contract award, submit separate request for each substitute proposal, supported by complete data, with Drawings and samples as appropriate, including:
 - .1 Itemized comparison of qualities of proposed substitution with product specified, showing proof of equality or superiority, substantiating compliance with Contract Documents, and including product identification and description, performance and test data, references and samples, where requested or applicable.
 - .2 Changes required in other elements of Work due to substitution.
 - .3 Effect on construction schedule and Contract Time.
 - .4 Change in cost, if any, and amount of net change to Contract Sum.

- .5 Availability of maintenance service, and source of replacement materials, where applicable.
- .6 Reason for substitution request.
- 2.3.2 Furnish additional information for substitute proposals upon request. If decision on use of substitute cannot be made or obtained within a reasonable time, use product specified.
- 2.4 **Installation of Substitute Products or Materials**
 - 2.4.1 When an accepted substitute, or "equivalent to" item of equipment or material, requires changes or additions to Project, make adjustments and changes required to coordinate Work for installation without additional cost to the Agency.
- 2.5 **Changes Due to Substitutions**
 - 2.5.1 Any additional cost, loss or damage arising from substitutions is Contractor's responsibility, notwithstanding approval or acceptance of such substitution by Agency or Consultant, unless such substitution was made at written request or direction by the Agency or Consultant.
 - 2.5.2 Any schedule delays due to the processing of substitutions proposals is Contractor's responsibility.
 - 2.5.3 Modifications to Contract Sum Due to Substitutions:
 - .1 Agency will receive full credit for cost differential between specified item and proposed substitution.
 - .2 Substitution proposals that increase Contract Sum will be rejected, unless proposed substitution was made at written request or direction by the Agency or Consultant.
- 3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

1 **GENERAL**

1.1 **Instructions**

1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.

1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.

1.2 **Work Included**

1.2.1 Submittals and procedures required for closeout.

1.3 **Take-Over Procedures**

1.3.1 Contractor to notify Consultant, in writing, when he feels he meets the requirements for Occupancy.

1.3.2 The Consultant, the Contractor and the required Subcontractors shall prepare a list of incomplete and unsatisfactory Work.

1.3.3 Contractor shall make written application to the Consultant for Occupancy which must include all of the following:

.1 Statement that the Contract is substantially performed in compliance with the Contract Documents.

.2 Submission of closeout requirements.

1.3.4 A lump sum amount of the Contract will be left uncertified by the Consultant until all applicable certificates, warranties (including extended warranties), tax rebates, balancing report, demonstrations of systems, final cleaning and deficiencies have been received or completed to the satisfaction of the Consultant. The lump sum amount retained for such purpose shall be the greater of the following:

.1 The summation of:

i) Three percent (3%) of the first \$1,000,000 of the Contract price,

ii) Two percent (2%) of the next \$1,000,000 of the Contract price, and,

iii) One percent (1%) of the balance of the Contract price.

1.3.5 When all deficiencies have been completed and verified by the Contractor, he must notify the Consultant for further review. Upon becoming satisfied that all deficiencies have been corrected and upon receiving all certificates, warranties, balancing reports and tax rebates and upon verifying completeness of all final cleaning and demonstrations and upon receiving the Contractor's final invoice, a Final Payment Certificate" will be issued by the Consultant.

1.3.6 If the Contractor notifies the Consultant to re-review deficiencies, and upon visiting the project, the Consultant finds less than 75 percent (%) completion of the outstanding listed deficiency items, it will be judged that the Contractor has not verified the deficiencies prior to notifying the Consultant.

1.3.7 If all deficiencies are not completed within a reasonable period of time, the Consultant will invoke the Agency's right to perform Work

or stop the Work or terminate Contract.

- 1.3.8 Assemble warranties, affidavits and certificates required by Contract Documents for various materials, systems and equipment. Include copies of permits and certificates of inspection and permit closure/sign off obtained by Contractor. Place Documents in order and list each Document on transmittal letter or form.

1.4 **Closeout Requirements**

1.4.1 **Project As-Built Documents**

- .1 General: The Project As-Built Documents consist of As-Built Drawings, Shop Drawings, and Specifications. As-Built Drawings are to be provided in Auto CAD soft copy and Maintenance Manuals provided in PDF soft copy. Maintain Documents and Samples at Project site. As-Built and all close-out Documents to be provided on a USB.
- .2 Record the actual "as-built" details of the project on the white prints throughout the duration of the project. Keep Project As-Built Drawings current and do not record irrelevant information.
- .3 Modify the electronic Drawing files (dwg) and specifications and accurately record all significant deviations from the Contract Documents in the Work, caused by site conditions and changes originated from all Consultants, Contractor/Subcontractor originated changes, Change Orders, Site Instructions, Supplementary Instructions, Addenda, instructions by correspondence and Jurisdictional Authority approvals.
- .4 Record location of concealed elements which are required for maintenance, alteration Work and building additions.
- .5 Eradicate all obsolete information.
- .6 Clearly mark each of project As-Built Drawings, "Project As-Built Copy" in the title block. Maintain in good condition, available at all times for inspection by the Consultant's site representatives, and do not use for construction purposes.
- .7 Keep Project As-Built Drawings current and do not record irrelevant information.
- .8 Do not permanently conceal any Work until the required information has been recorded.
- .9 Proof that the Project As-Built Drawings are current will consist of the Consultant's site representatives making a visual check of the Project As-Built Drawings at the project site.
- .10 Completion of the Project As-Built Drawings to current stage of construction shall be considered a requirement for validation of any application for payment made by Contractor.
- .11 Date all entries with proper reference to the appropriate Change Order or approval number. Call attention to the entry by a "cloud" around the area or areas affected.
- .12 Submit one complete set of final "Reviewed" or "Reviewed-

As-Modified" Shop Drawings, on which corrections have been recorded of changes made during fabrication and installation of unforeseen conditions. Do not include Drawings which were "Returned and Resubmit."

1.4.2 Certificates

- .1 Provide to the Consultant any certificates required by all local authorities and all certificates of compliance or verification required throughout the specification. Any certificates obtained prior to the maintenance manual submission should be included in the manual. Any certificates obtained after the maintenance manual submission shall be sent to the Consultant prior to Final Payment Certification.
- .2 Contractor must provide proof of that permit has been successfully closed by the City.

1.4.3 Warranties

- .1 Provide to the Consultant, all specified warranties, extended warranties and free manufacturer extended warranties as applies to each individual section. The warranty period(s) shall commence the date of Substantial Performance and be valid for the full duration specified. Warranties are to be sent to the Consultant prior to Final Payment Certification.
- .2 Prior to the end of the one-year and two-year warranty periods following the date of Substantial Performance of the Work, perform with the Agency inspections of the Work and review any defects or deficiencies which have been observed and reported during that period. Perform appropriate repairs to the Work in accordance with the Construction Contract Documents. All repairs must be satisfactorily completed for the Consultant to certify the payment of a warranty security release.

1.5 Demonstration of Systems

- 1.5.1 Provide instruction to the Agency's operating and maintenance personnel, during regular work hours, on the care, operation and maintenance of all equipment and systems as specified in the applicable sections. Refer to the various sections of the specifications for the specific instructional requirements.
- 1.5.2 All instructional periods shall be prior to the acceptance and handover of systems to the Agency for operation responsibility and also prior to Final Payment Certification.
- 1.5.3 For equipment requiring seasonal operation, perform instructions for other seasons within six months.
- 1.5.4 Use Information Manual for basis of instruction. Review contents of Manual with personnel in detail to explain operation and maintenance.
- 1.5.5 Prepare and insert additional data in the Information Manual when need for such data becomes apparent during instruction.

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- 1.5.6 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance and shutdown of each item of equipment at equipment location.
- 1.5.7 See Electrical Specification Section 26 01 00, Electrical General Requirements, and Mechanical specification Section 21 05 01, Mechanical General Requirements for additional requirements.

1.6 **Acceptance of Systems**

- 1.6.1 On completion of each trade's scope of work, and during the deficiency review by the Consultant, the Consultant shall review the materials and installation for acceptance. Any unfinished or unacceptable work will be noted. The Contractor shall arrange for the work to be repaired, replaced, or added, as required. This review does not relieve the Contractor of any responsibility related to warranty of the work.

2 **PRODUCTS** – NOT APPLICABLE.

3 **EXECUTION** – NOT APPLICABLE.

END OF SECTION

-
- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 All sections of Division 1, as well as the Contract between the Agency and the Contractor, apply to all trades working on the project.
- 1.1.2 Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.2 **Work Included**
- 1.2.1 General cleaning during construction and final cleaning prior to inspection for final inspection of work.
- 1.2.2 Requirements for cleaning specified in this Section are in addition to specific cleaning requirements specified in various technical Specification Sections.
- 2 **PRODUCTS**
- Refer to Infection Control Procedures, Section 01 35 33.
- 2.1 **Cleaning Materials**
- 2.1.1 Use materials which will not create hazards to health or property and which will not damage surfaces.
- 2.1.2 Use materials and methods which comply with requirements of local authorities having jurisdiction over Work and are recommended by manufacturer or fabricator of material being cleaned.
- 3 **EXECUTION**
- 3.1 **Cleaning During Construction**
- 3.1.1 Maintain the work, at least on a daily basis, free from accumulations of waste material and debris.
- 3.1.2 Provide on-site dump containers for collection of waste materials, and debris. All waste to be sorted on site to maximize recyclability.
- 3.1.3 Remove waste materials and debris from site.
- 3.1.4 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.
- 3.1.5 Vacuum clean interior building areas prior to start of finish painting and continue vacuum cleaning in each area on "as needed" basis until that area is ready for occupancy.
- 3.1.6 Vacuum clean and damp mop work areas within resident rooms immediately after doors installation. Co-ordinate acceptance by staff directly with building operations. This must be done prior to each resident room being re-occupied.
- 3.2 **Final Cleaning**
- 3.2.1 Exterior Cleaning:
- .1 Remove debris, waste and surplus materials from site, and from drainage systems.
- .2 Remove temporary protection and temporary construction.
- .3 Remove stains, spills and foreign substances.

-
- .4 Sweep and hose down exterior walks where Work has been undertaken.
- 3.2.2 Interior Cleaning:
- .1 Remove temporary protection, tags, labels and markings from materials, fixtures, accessories and equipment.
 - .2 Clean transparent and glossy materials to polished condition; remove foreign substances.
 - .3 Polish reflective surfaces to clear shine.
 - .4 Clean switch and outlet plates, finish hardware, handrails and metal trim of smudges, paint and soiling.
 - .5 Clean aluminum, stainless steel, bronze and similar metals according to instructions of metal manufacturer.
 - .6 Clean resilient floors thoroughly with well-rinsed mop containing only enough moisture to remove surface dirt and dust; then buff dry by machine, bringing surfaces to sheen.
 - .7 Broom clean and vacuum floors.
 - .8 Clean under and behind convectors and other equipment.
 - .9 Clean inside cabinets and other concealed areas.
 - .10 Repaint surfaces and items that cannot be cleaned.
 - .11 Do not remove 'ULC' labels or 'CSA Approved' labels.

3.3 **Damaged Materials**

- 3.3.1 Any materials damaged during final cleaning operation shall be replaced by the Contractor. Extra stock, as supplied under Contract, will not be used for this replacement purpose.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Related Sections**
- 1.2.1 Mechanical & Electrical Removals - Divisions 21, 22, 23, and 26 (refer Drawings).
- 1.3 **Intent**
- 1.3.1 Precautions must be taken to avoid any intrusion on or into neighbouring property with equipment and/or materials and/or dust.
- 1.3.2 Provide all articles, labour, materials, equipment, transportation, hosting and incidentals notes, specified and required to complete the Work of this Section.
- 1.4 **Occupancy of Existing Building**
- 1.4.1 Due to the ongoing occupancy of the building, the Contractor is required to notify the Agency of any safety precautions, which the Agency must take in order to ensure the safety of the building occupants. Vacating of certain areas of building will be arranged by the Agency, according to phasing plan. Any additional requested changes to occupancy must be negotiated with the Agency. A minimum of two weeks lead time will be required for the Agency to adjust occupancy of any occupied areas.
- 1.5 **Phasing**
- 1.5.1 The demolition work must be undertaken in phases, to suit the construction/renovation progress and occupancy of the building. This Sub-contractor is to coordinate activities with the Contractor.
- 1.6 **Access**
- 1.6.1 Access for the public to the building will be via the existing main entrance.
- 1.6.2 Staff entrance will be at existing entrances.
- 1.6.3 Contractor's entrance to be determined.
- 1.7 **Reports**
- 1.7.1 The Agency and Consultants assume no responsibility for any interpretation or deduction that the Contractor may make from the report. The Contractor shall establish the nature of site conditions to their own satisfaction.
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1.8 **Work Included**

1.8.1 The Contractor shall complete all removal and demolition work as indicated on the Drawings or specifically mentioned in these Specifications, including but not limited to the following:

- .1 Flooring and adhesive from designated areas.
- .2 Equipment (remove temporarily for later re-installation).
- .3 Cabinetry as indicated.
- .4 Drywall ceiling.
- .5 T-bar ceiling.
- .6 Drywall partitions.
- .7 One door and frame (Scope 2 – Malton Village staff room).
- .8 Mechanical and electrical.
- .9 Sidewalks.
- .10 Millwork (remove temporarily for later re-installation).

1.9 **Examination**

1.9.1 It shall be the responsibility of the Contractor to visit the site and note all characteristics and features affecting the Work of this Section.

1.9.2 No allowance will be made for any difficulties encountered or any expenses incurred by this Trade on account of any conditions of this site or any item existing thereon which is visible, implied, or known to exist at the time of Proposal.

1.10 **Permits and Regulations**

1.10.1 Arrange and pay for all permits, landfill fees, notices, and inspections necessary for the proper execution and completion of the demolition.

1.11 **Protection**

1.11.1 The Contractor shall be entirely responsible for, and make good all damage to adjoining properties and buildings, adjacent walks, curbs, etc.

1.11.2 The Contractor shall be entirely responsible for the safety of all persons lawfully engaged in the Work when such injury is caused by negligence or any act of the Contractor or any person or persons engaged in the Work of this Trade.

1.11.3 It shall be the responsibility of the Contractor to protect the public and building occupants from injury during the course of demolition by providing suitable barriers, fences, coverings, guardrails, etc., that may be required by the Agency and/or Municipal Authorities.

1.12 **Existing Services**

1.12.1 Locate and disconnect, cap and plug all gas, water, sewer, hydro, telephone and other services, which are to be removed as required. In each case the Utility Company involved shall be notified in advance and its approval obtained before commencing that portion of the Work. Approximate locations of existing utilities have been

indicated on the accompanying Drawings, No responsibility is assumed by the Consultant for the exact locations as shown. Not all locations of services are known.

- 1.12.2 The Contractor must ensure that services to the occupied building are maintained, and if disturbed by the demolition activity that they are restored immediately.

1.13 **Clean-up**

- 1.13.1 Leave the site in a clean and orderly condition to the satisfaction of the Contractor. If this Sub-contractor fails to do so the Contractor may order excess debris to be removed at the Sub-contractor's expense.

2 **PRODUCTS**

2.1 **Salvage Material**

- 2.1.1 All material from the demolition that is not scheduled for re-use shall become the property of the Contractor unless noted, who shall remove all material and debris from the site as quickly as possible. Burning of debris on the site will not be permitted.
- 2.1.2 Material required to be re-used in this Contract:
.1 Pot lights at Malton Village Staff Room.
- 2.1.3 The following is a list of items to be retained and given to the Agency:
.1 Replaced kitchen equipment at Malton Village.
- 2.1.4 The following items should be separated for recycling:
.1 Copper piping.
.2 Galvanized steel piping and conduit.
.3 Sheet metal ductwork.
.4 Steel studs.
.5 Drywall and acoustic tile.

3 **EXECUTION**

3.1 **General**

- 3.1.1 Carry out all demolition, removal and disposal in accordance with applicable provincial and local regulations.
- 3.1.2 Execute demolition in an orderly and careful manner with due consideration for adjacent structures and finishes.
- 3.1.3 Keep work wetted down thoroughly to prevent dust and dirt from rising during demolition operations. Water shall be provided for this purpose by the Contractor. Upon completion of Work, any temporary water and power lines shall be removed.
- 3.1.4 All necessary precautions to guard against movement or settlement of the remaining structure shall be taken including all necessary bracing or shoring that is required.

3.2 **Concrete Slabs**

- 3.2.1 Where required for new construction, new under floor piping, connections to existing services, electrical conduits, etc., neatly

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saw-cut out areas of slabs are required. This scope should be coordinated by reviewing Mechanical, Electrical, and Architectural Drawings.

3.3 **PCB Ballasts**

3.3.1 The Contractor, in conjunction with the Inspection and Testing Company, shall determine the ballasts containing PCB's. These shall be stored in the designated storage facility. Handling and storage shall be undertaken in accordance with *Ontario Regulation 11/82* as amended and any other Provincial and Municipal requirements. Non-PCB contaminated ballasts shall be disposed of at a licensed landfill.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Intent**
- 1.2.1 Provide all articles, labour, materials, equipment, transportation, hoisting and incidentals noted, specified or required to complete the Work of this Section.
- 1.3 **Guarantee**
- 1.3.1 Provide a written guarantee of Work of this Section against defects in material and quality of Work for a period of one (1) year from the date of publication of the Certificate of Substantial Performance.
- 1.4 **Section Includes**
- 1.4.1 Provide all of the rough and finished carpentry indicated on the working Drawings or specified herein, including but not limited to the following:
- .1 Accept delivery, store and install the following:
 - .1 Hollow Metal Frame and Door.
 - .2 Finishing Hardware.
- 1.4.2 General Trades – Provide the following:
- .1 Wood nailers and blocking.
 - .2 Wood furring.
 - .3 Blocking for Mechanical and Electrical equipment.
 - .4 Installation of all materials required for a finished project that are not installed by suppliers.
- 1.4.3 Installation of all hardware specified.
- 1.4.4 Supply and installation of all materials and labour required for a finished project.
- 1.4.5 Supply and install wood blocking for closet door tracks.
- 1.5 **Related Sections**
- 1.5.1 Section 06 40 00, Architectural Woodwork.
 - 1.5.2 Section 08 14 00, Supply of Wood Doors.
 - 1.5.3 Section 08 70 00, Hardware.
 - 1.5.4 Section 09 90 00, Painting.
- 1.6 **By-laws**
- 1.6.1 The design, fabrication and erection shall conform to the requirements of the Ontario Building Code and any other applicable local building by-law.
-

1.7 **Reference Publications**

1.7.1 This Specification makes reference to the latest edition of the following publications listed below.

1.7.2 C.S.A. Standards

- | | | |
|----|-----------------------|---|
| .1 | CAN3-086-M84 | Engineering Design in Wood
(Working Stress Design) |
| .2 | CAN3-086.1-M84 | Engineering Design In Wood |
| .3 | CAN3-086S1/086.1S1.87 | Supplement No. 1 |
| .4 | 0121-M1978 | Douglas Fir Plywood |
| .5 | 0141-1970 | Softwood Lumber |

1.7.3 Associations:

- | | |
|----|---|
| .1 | National Hardwood Lumber Association Standards |
| .2 | Architectural Woodwork Manufacturers Association of
Canada Standards. (A.W.M.A.C.) |

1.7.4 Publications:

- | | |
|----|--|
| .1 | National Lumber Grades Authority (N.L.G.A.) - Standard
Grading Rules for Canadian Lumber. |
|----|--|

1.8 **Submittals**

1.8.1 Submit three copies of all Shop Drawings for the Consultant's review before any Work is commenced. Drawings to bear stamp and seal of a Professional Engineer licensed to practice in the Province of Ontario for all connection and designed items.

1.8.2 Erection Drawings shall show sizes and locations of all members and give complete location and details for setting anchor bolts and leveling plates. The elevations of all bearing plates shall be clearly shown.

1.8.3 Do not commence fabrication until final approval of Shop Drawings is received.

1.9 **Delivery, Storage and Handling**

1.9.1 Store all materials under waterproof cover both in transit and on the site in such a manner as to cause no damage to other materials, to any existing building or property or to the new structure.

1.9.2 Co-ordinate delivery schedule of material with the suppliers.

1.9.3 Pile doors flat on level supports to prevent damage. Protect face of first door by placing plywood or cardboard between supports and door. Cover the top door and edges in a similar manner.

1.9.4 Store doors in a dry, well ventilated area. Doors stored for an extensive period of time shall have top and bottom edges sealed.

1.9.5 Lift doors on and off piles; never drag across each other to prevent surface damage and scratching. Do not stand doors on ends for storage.

1.10 **Rejections**

1.10.1 Defective materials or quality of Work whenever found, at any time prior to final acceptance of the Work, shall be rejected. Inspection will not relieve the Contractor of responsibility, but is a precaution

against oversight or errors. Defective materials shall be removed and replaced by the Contractor at their own expense, and they shall be responsible for the cost of the Work of other trades affected by this replacement.

- 1.11 **Co-operation with Other Trades**
- 1.11.1 Give sufficient notice to the Painting Contractor so that untreated or unprimed carpentry items or material can be primed immediately upon delivery to the site.
- 1.11.2 Supply fastenings with installation locations and necessary templates to other trades to which wood is to be secured.
- 1.12 **Clean-up**
- 1.12.1 Upon completion of the Work of this Section, remove all surplus material and debris caused by the Work of this Trade from the site to the satisfaction of the Consultant.
- 1.13 **Guarantee**
- 1.13.1 Provide a written guarantee of Work of this Section against defects in material and quality of Work for a period of one (1) year from the date of publication of the Certificate of Substantial Performance.
- 2 **PRODUCTS**
- 2.1 **Materials**
- 2.1.1 All lumber for rough carpentry shall be well seasoned stock, free from shakes, splits, dry rot, mildew or other defects which would impair its strength or durability. For exterior applications and for parapets, use pressure treated lumber.
- 2.1.2 Unless otherwise specified, all rough lumber shall be well seasoned No. 1 Eastern Spruce conforming to N.L.G.A. grading rules.
- 2.1.3 Douglas Fir plywood: To C.S.A. 0121-M1978 (sanded G2S Grade "A" veneer). (Un-sanded SAG Grade "C" veneer).
- 3 **EXECUTION**
- 3.1 **Quality of Work**
- 3.1.1 Machine sand all exposed surfaces of finished woodwork to an even smooth surface ready for finishing; fit all joints and mitres accurately with nail heads set and ready for finishing.
- 3.1.2 Back out flat members of trim to prevent warping.
- 3.1.3 Hand sand all finished materials, after erection to remove roughness, machine marks or other blemishes.
- 3.1.4 Apply plastic laminate to Architectural Wood Manufacturers Association Standards. Use lengths adequate for longest dimension of surface to be covered. Splices within lengths of 2.4384m (8'-0") will be rejected.
- 3.1.5 Protect all exposed and finished woodwork after installation against damage during the progress of the Work.

- 3.2 **Fastenings**
- 3.2.1 Fastenings to solid masonry or concrete surfaces shall be with expansion shields and lag screws, unless otherwise specified, and to steel with bolts and nuts. Wood or inorganic fibre plugs shall not be permitted. Powder activated fasteners and staples shall not be used unless permitted by the Consultant.
- 3.3 **Wood Blocking**
- 3.3.1 Construct all wood blocking as on the Architectural Drawings.
- 3.3.2 Accurately fit all Work to sit level and true and securely fastened.
- 3.4 **Wood Doors** (Scope 1 and Scope 5)
- 3.4.1 Installation of wood doors supplied under Section 08 14 00, Wood Doors shall be carried out by workers skilled in this trade and done in strict accordance with the manufacturer's direction to produce a first class installation.
- 3.4.2 All door preparation, cutting, finishing must be done in the staging area, NOT in the resident rooms. Only measuring and installation is to take place in the resident rooms.
- 3.4.3 Condition doors to the average humidity of the location before hanging.
- 3.4.4 Trim square and accurately as to size, individually inspect, bench, belt sand and label all doors.
- 3.4.5 Cut down doors to fit openings smaller than those for which they are manufactured.
- 3.4.6 Trim equally from door sides when planing to fit. Trim equally from top and bottom if height is to be reduced more than 19.05mm (3/4"), never more than 19.05mm (3/4") from bottom.
- 3.4.7 Seal all door edges and routing for hardware.
- 3.4.8 Hang doors so that they will operate freely, without tension or free swing. Allow 4.7625mm (3/16") clearance in overall opening width and 3.175mm (1/8") clearance at top to allow for swelling in extreme humidity.
- 3.4.9 Reinstall existing wood doors for washrooms when hardware has been maintained / replaced.
- 3.4.10 Co-ordinate painting / finishing of doors, to be completed prior to attaching new hardware.
- 3.5 **Hollow Metal Door Frames Installation** (Scope 2)
- 3.5.1 Set hollow metal frames plumb, square, level and at correct elevation. Brace solidly in position while being installed.
- 3.5.2 Provide a temporary horizontal wood spreader at the mid height of the door opening to ensure the frame remains plumb and true until surrounding partitions are complete.

- 3.6 **Hollow Metal Doors Installation** (Scope 2)
- 3.6.1 Installation of hollow metal doors shall be carried out by workers skilled in this trade and done in strict accordance with the manufacturer's direction to produce a first class installation.
- 3.6.2 Hang doors so that they will operate freely, without tension or free swing.
- 3.7 **Finishing Hardware**
- 3.7.1 Finishing hardware shall be supplied by the Hardware Supplier under the Work of Section 08 70 00 Hardware, and installed by this Sub-Contractor.
- 3.7.2 Mortise and neatly fit finishing hardware. Cut mortises straight and sharp without ragged edges and size accurately to accommodate the hardware. Where mortising and application have not been done in a first class professional manner such Work shall be replaced.
- 3.7.2 Install hardware in accordance with the manufacturer's recommendations and in conformance with Drawings.
- 3.7.3 Examine and adjust as required all doors and other moveable parts prior to completion of the building.

END OF SECTION

1 **GENERAL**

1.1 **Instructions**

- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.

1.2 **Section Includes**

- 1.2.1 Provide all millwork and casework as shown on the Drawings. These items include:
 - .1 Architectural Casework
 - .2 Solid Surface Countertops
 - .3 Finishing Hardware for Millwork

1.3 **Related Sections**

- 1.3.1 Section 06 10 00, General Trades.
- 1.3.2 Electrical – Installation of Receptacles and Wiring (refer to Drawings).
- 1.3.3 Mechanical – Supply & Install of Faucets, Sinks (refer to Drawings).

1.4 **Quality Assurance**

- 1.4.1 For fabrication and installation of architectural woodwork, use only personnel who are completely trained and experienced in this field.
- 1.4.2 If there is a conflict between specification and Drawings, the specification takes precedence.
Produce the Work according to millwork standards of the Architectural Woodwork Manufacturer's Association of Canada (AWMAC) Quality Standards Illustrated 2003.
- 1.4.3 Any items of millwork not given a specific quality grade shall be built to AWMAC "Custom Grade" standards.
- 1.4.4 Use only No added Formaldehyde products in all cases where such products are available.

1.5 **Reference Standard**

- 1.5.1 AWMAC Quality Standards Illustrated
- 1.5.2 ANSI-A208.1-99
- 1.5.3 NEMA
- 1.5.4 CSA 0121 Douglas Fir Plywood
- 1.5.5 CSA 0141 Softwood Lumber
- 1.5.6 CAN3 CSA 0188.1 M78 Interior Mat Formed Wood Particle Board

1.6 **Submittals**

1.6.1 **Shop Drawings**

- .1 Requirements for Shop Drawings submission are described in Section 01 30 00, Instructions to All Trades, specifically

provide the following:

- .1 General arrangement in plan and elevation.
- .2 Locations of required blocking (which will be provided by Section 06 10 00, General Trades).
- .3 Location of all related service outlets.
- .4 Details of connections, attachments, anchors as applicable.
- .5 Where surfaces require splicing of finish surface material, submit drawing showing locations of splices.
- .6 Direction of wood grain to be shown in all cases where wood is used.

1.6.2 Samples

- .1 For casework submit two samples of door material (cut through to show core), countertop profile, nosing, edge banding, for the Consultant's review.
- .2 Submit cut sheets of all hardware including product name and specifications for the Consultant's review:
- .3 Do not commence Work until reviewed samples have been returned.

1.7 Rejections

- 1.7.1 Defective materials or poor quality of Work, whenever found at any time prior to final acceptance of the Work, shall be rejected regardless of previous inspection. Inspection will not relieve responsibility but is a precaution against oversight and error.
- 1.7.2 Remove and replace defective materials and make good Work of other trades affected by this replacement, at no additional cost to the Agency.

1.8 Examination

- 1.8.1 Report to the Consultant, in writing, all defects of surfaces or Work prepared by other trades and/or unsatisfactory site conditions.
- 1.8.2 Thoroughly examine all surfaces scheduled to receive Architectural Woodwork to see that they are secure, rigid, true and not liable to impair performance or appearance.
- 1.8.3 Commencement of Work implies total acceptance of surface and site conditions.
- 1.8.4 Prior to fabrication, verify any field measurements necessary to ensure a perfect fit.

1.9 Delivery, Storage and Handling

- 1.9.1 Deliver and store all millwork and casework under waterproof cover, both in transit and on the site.
- 1.9.2 Store in a dry well ventilated area that does not hinder the Work of other trades.
- 1.9.3 This Sub-contractor and the Contractor shall be jointly responsible to ensure that millwork is not delivered to the site until areas achieve

a maximum air moisture content of 15 per cent, or such moisture level to ensure that the woodwork will not be damaged due to excessive moisture and/or changes in moisture content.

1.9.4 Any items which are chipped, bent, scratched or otherwise damaged at the time of installation are to be removed and replaced with new materials.

1.10 **Job Conditions**

1.10.1 Co-operate in coordinating Work of related Sections in order that The Work may proceed in an orderly and effective manner.

1.11 **Warranty**

1.11.1 The Contractor warrants that all materials and workmanship shall be of the quality, quantity specified and shown, and that any defect due to improper workmanship or material discovered and made known to them by the Agency, within two years from the date of substantial performance, shall be repaired or replaced by the Contractor, to the Designer's and Agency's satisfaction, without additional expense to the Agency.

1.12 **Clean-up**

1.12.1 Promptly as the Work proceeds, and upon completion, clean-up and remove from the premises all rubbish and surplus materials resulting from the foregoing Work.

2 **PRODUCTS**

2.1 **General**

2.1.1 Provide new materials only, free from defects impairing physical or appearance performance.

2.1.2 Obtain the Consultant's approval before attempting to substitute materials. Only materials that are shown by the Contractor to be as good as or better than the products specified will be accepted. Review Division 1 specification requirements regarding substitution. The Consultant will not conduct research to determine equivalence - if a substitute is requested, it must be accompanied by supporting documentation to show its equivalence. Acceptance is the prerogative of the Consultant.

2.2 **Materials**

2.2.1 Softwood lumber: to CSA 0141-1970 and National Lumber Grades Authority requirements, with maximum moisture content of 9 per cent for interior work, Douglas Fir or Ponderosa Pine species, to AWMAC Custom grade.

2.2.2 Hardwood lumber for finished solid wood items: Red or White Birch to AWMAC Premium Grade. To National Hardwood Lumber Association (NHLA) requirements, moisture content of maximum 9 per cent for interior work.

2.2.3 Hardwood plywood: to CSA 0115-1991 and AWMAC Standards.

Plywood shall be G1S or G2S when both faces are exposed. Face veneer shall be flich matched.

Type of veneer: rotary cut, birch, paint grade.

2.2.4 Canadian softwood plywood: to CSA 0151-M1978 Pine species, Type II bond, veneer core, G2S grade "A".

- .1 Douglas fir plywood: To CSA 0121-M1978 sanded, G1S; or G2S grade where plywood is exposed on 2-sides.
- .2 Composition board core plywood.
- .3 Medium density fibreboard (MDF) ANSI A208.2.
- .4 Plastic Laminate NEMA LD3-95 GRADE VGL-HGL Plastic Laminate G48 General Purpose.

2.3 **Casework**

2.3.1 Custom Grade Kitchen Cabinets:

- .1 Surface finish - NEMA LD3-95 GRADE VGL-HGL Plastic Laminate G48 General Purpose Grade, nominal thickness 1.2mm / 0.048".
- .2 Substrates: (1) Medium density fibreboard, (2) Composition core plywood.
- .3 Panel edging: PVC Thin edge in colour matching face colour.
- .4 Colour: Wilsonart Premium Laminate Phantom Ecru 8212k-28, Gloss line finish. Aeon scratch resistance.
- .5 Finish. Same colour both sides of all surfaces.
- .6 Material thickness:
 - .1 Door fronts: 19mm
 - .2 Gables (end, exposed): 19mm
 - .3 Gables (interior stiffeners): 19mm
 - .4 Shelves (interior of case): 19mm
 - .5 Back panel: 12mm
 - .6 Case: 19mm
 - .7 Toe Kick: 19mm HPL on veneer core plywood

2.4 **Countertops**

2.4.1 Kitchen Counters:

- .1 Pencil edge.
- .2 Nosing depth: 38mm.
- .3 Material thickness: 13mm fully supported on 19mm plywood.
- .4 Surface: Wilsonart solid surfacing, or equivalent.
- .6 Colour: Chilled Earth, 9228SS.

2.5 **Particleboard**

2.5.1 Particleboard, CSA-0118-1975, Type 11, Grade R, minimum 690 K8/m3, 4.5 to 8 per cent moisture content.

2.6 **Melamine Panels**

2.6.1 Melamine resin impregnated sheet thermally fused to rigid particleboard substrate. General-purpose (GP) grades 120-gram

weight paper required when available. Colour to be white or as noted on the Drawings.

2.7 **Backer Sheet**

2.7.1 Backer standard .028 thick.

All panels shall be balanced with 0.5mm (0.030) backing sheet manufactured by the same manufacturer as the facing sheet.

Core CSA 0115-M1982 (G/S0) or CSA0121-M1978 Grade "B" or CAN3-0188.1-M78, Grade R.

3 **EXECUTION**

3.1 **Preparation and Protection**

3.1.1 Protect Work of other trades from damage.

3.1.2 Make good any resulting damage, to the satisfaction of the Consultant, at no additional cost to the Agency.

3.2 **Fabrication**

3.2.1 All casework to be constructed using hardwood dowels, glue and biscuits.

3.2.2 Fabrication Cabinet Carcass:

.1 32-millimeter system from 19mm thick melamine composite panel using flush frameless construction and exposed edges, to AWMAC Standard "Custom grade" c/w 3mm thick PVC edge banding on exposed edges. All exposed edge banding complete with 3mm radiuses edges and corners.

.2 Factory install all hardware firmly into position for long life under hard use. Install two (2) hinges on doors up to one (1) meter in height, three (3) hinges to 1.5 meter in height and four (4) hinges for doors greater than 1.5 meters in height or shown otherwise.

.3 Install neoprene or rubber bumpers, at all cabinet doors and drawers.

.4 Fabricate toe kicks from 19mm waterproof veneer core ply, fir or spruce.

3.2.3 Counter Tops:

.1 Counter tops apply Tremco Tremsil 200 silicone sealant at junction of tops when tops are joined. All joints to be over a gable or supported otherwise.

.2 Apply a small bead of mildew-resistant paintable silicone sealant at junction of counter back and adjacent wall finish.

3.2.4 Frame materials with tight joints held in place by tight joint fasteners.

3.2.5 Do not exceed 610mm maximum width of cabinet without a divider or as specified otherwise.

3.2.6 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings. Design units to fit together if site assembly is required.

3.2.7 Conceal joints and connections where possible. Joints made on site shall be equal in quality of work to joints made in the shop.

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- 3.2.8 Apply plastic laminate to substrates where indicated to Architectural Woodwork Manufacturers Association of Canada (AWMAC) standards, using PVA glue (NO VOC, No formaldehyde). In certain cases, where melamine is required on inside surface and HPL on exterior surface, it is permitted to apply HPL over top of the melamine surface, with proper preparation and application methods.
 - 3.2.9 Apply plastic laminate to edges first, trim flush with face and apply face laminate lapping edge. Chamfer edge of face laminate 20 degrees.
 - 3.2.10 Edging is to be applied using only equipment designed for the application of the thick PVC in strict accordance with the specifications of both the thick PVC and hot-melt adhesive manufacturers. All edges and all corners of this 3mm PVC edge-banding are to be machined to a 3mm radius for all cabinet parts.
 - 3.2.11 Care should be taken during application to achieve the thinnest glue-line consistent with a good bond without causing skips or unspread areas.
 - 3.2.12 Finish all exposed edges with 3mm thick PVC edge banding material, applied by an Edge-Bander using hot-melt adhesive. Colour to match the melamine. Radius all exposed edges and corners.
 - 3.2.13 Install finishing hardware to manufacturer's specifications. All casework drawers shall be installed with drawer slides.
 - 3.2.14 Machine sand all exposed surfaces of finished woodwork to an even smooth surface ready for finishing; fit all joints and mitres accurately.

3.3 **Installation**

- 3.3.1 Site measure all locations where millwork / casework is to be installed.
Determine any rough-ins (examples are receptacles, thermostats, data outlets, etc.) which will cause interference with the millwork items as designed, and make adjustments for them in the millwork construction.
- 3.3.2 Set and secure all materials and components in place, rigid plumb and square.
- 3.3.3 Provide all furring strips and strapping required to fix millwork and casework to walls, etc.
- 3.3.4 Except for economy grade cabinets, filler pieces may NOT be used: all cabinets must be built to fit the site measured openings.
- 3.3.5 Ensure that millwork items fit accurately into the built spaces. Where joints greater than 6mm occur between cabinets and adjacent construction, provide new elements to produce an accurate fit.
- 3.3.6 After installation, fit and adjust operating hardware for wood and laminated plastic cabinet door, drawers and shelves.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Fire stopping and smoke seals through penetrations at wall and floor openings.
- 1.3 **Related Sections**
- 1.3.1 Section 07 90 00 – Joint Sealers: non-rated joint sealants.
- 1.3.2 Section 09 29 00 – Gypsum Board: penetrations in rated gypsum board assemblies.
- 1.3.3 Division 21, 22, 23 – Refer to Mechanical Drawings.
- 1.3.4 Division 26 – Refer to Electrical Drawings.
- 1.4 **References**
- 1.4.1 CAN/CGSB-19.13-M87: sealing Compound, One Component, Elastomeric, Chemical Curing.
- 1.4.2 CAN/CGSB-19.24-M90: Multicomponent, Chemical Curing Sealing Compound.
- 1.4.3 CAN/ULC-S102-M88: Surface Burning Characteristics of Building Materials and Assemblies.
- 1.4.4 can4-s115-m85: Fire Tests of Fire Stops.
- 1.4.5 ASTM E84: Surface Burning Characteristics of Building Materials.
- 1.4.6 ASTM E119: Fire Tests of Building Construction and Materials.
- 1.4.7 ASTM E814: Fire Tests of Through-Penetration Fire Stops.
- 1.4.8 Underwriters' Laboratories of Canada: List of Equipment & Materials.
- 1.5 **System Description**
- 1.5.1 Seal empty holes and penetrations at floors, fire rated walls and smoke barrier walls.
- 1.5.2 Seal holes accommodating penetrating items such as cables, cable trays, pipes, ducts and conduits.
- 1.5.3 Seal penetration system used to maintain the integrity of time rated construction by providing a sealant against the spread of heat, flame and smoke.
- 1.5.4 Systems shall be UL classified or listed by Warnock-Hersey International for the appropriate required time rating.
- 1.6 **Submittals**
- 1.6.1 Submit Shop Drawings and product data to requirements of Section 01 30 00, Instructions to All Trades.
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- 1.6.2 Product Data: sealant manufacturer's installation instructions and standard Drawings, indicating ULC or WHI test designations.
- 1.6.3 Shop Drawings: Indicate sizes of openings, nature of penetrations, and tested methods of firestop and smoke seal protection being proposed.
- .1 Shop Drawings are to be sealed, signed and dated by a registered Professional Engineer licensed to practice in the Place of the Work and having a minimum of 10 years documented experience designing firestop and smoke seal systems.
- .2 Submit Shop Drawings to Consultant and to the authority having jurisdiction for their review and approval.
- 1.6.4 Submit the sealant manufacturer's letter of certification, to requirements of Section 01 30 00, Verifying that Products meet or exceed specified requirements.
- 1.6.5 Submit a certified laboratory report, to requirements of Section 01 30 00, Instructions to All Trades, indicating that Products Proposed for use conform to the requirements of ASTM E814 and CAN4-S115-M, and are classified by the Underwriter's Laboratories of Canada or Warnock-Hersey International.
- 1.7 **Quality Insurance**
- 1.7.1 Use only an approved applicator acceptable to sealant material manufacturer.
- 1.7.2 Fire stopping compounds shall not contain volatile solvents or require special application to protect Plastic pipe from fire stopping compound.
- 1.8 **Mock-Ups**
- 1.8.1 Construct job site mock-up to requirements of Section 01 30 00, Instructions to All Trades.
- 1.8.2 Apply one sample seal on representative substrates on each site for each fire rating required at each type of wall, floor or roof construction.
- 1.8.3 Comply with project requirements as to thickness and density of application to achieve fire rating.
- 1.8.4 Proceed with installation only after Consultant has reviewed and accepted mock-up.
- 1.8.5 Acceptable mock-up may remain as part of the complete work as standard.
- 1.9 **Delivery, Storage and Handling**
- 1.9.1 Deliver all materials to the Site in their original unopened packages.
- 1.9.2 Store materials in an enclosed shelter, preventing damage to containers.
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- 1.10 **Project Conditions**
- 1.10.1 Do not apply sealants when temperature of substrate material and surrounding air is below 5 degrees Celsius.
- 1.10.2 Maintain sealant at a minimum 18 degrees Celsius for best workability.
- 1.11 **Pre-Installation Conference**
- 1.11.1 Prior to commencement of fire stopping, arrange and conduct a pre-installation meeting to discuss proposed methods and materials to be used.
- 1.11.2 Representatives of the Agency, Consultant, Contractor, Installer, Manufacturer and the authority having jurisdiction are to be in attendance. Do not conduct meeting unless all identified parties are present.
- 2 **PRODUCTS**
- 2.1 **Manufacturers**
- 2.1.1 Manufacturers of firestop sealants having Product considered acceptable for use:
- .1 3M.
 - .2 AD Fire Protection.
 - .3 Hilti Canada.
 - .4 Tremco.
 - .5 The Rectorseal Corporation.
- 2.2 **Materials**
- 2.2.1 Firestop Sealant Type A: non-sag; asbestos-free; single component sealant composed of high temperature ceramic fibers and organic silica binders; ULC labeled; to CAN4-S115-M and CAN/ULC-S102-M.
- 2.2.2 Firestop Sealant Type B: three component; epoxidized polyurethane terpolymer; accommodating joint movement of +40/-25 percent (%); ULC labeled; to CAN/CGSB-19.24-M and CAN4-S115-M.
- 2.2.3 Firestop Sealant Type C: three component; self-levelling; chemically curing polyurethane sealant; ULC labeled; to CAN4-S115-M.
- 2.2.4 Firestop Sealant Type D: single component; low modulus; silicone rubber; moisture curing; ULC labelled; to CAN/CGSB-19.13-M and CAN4-S115-M.
- 2.2.5 Firestop Sealant Type E: single component; modified polyurethane; moisture curing; ULC labeled; to CAN/CGSB-19.13-M and CAN4-S115-M.
- 2.2.6 Primer: as recommended by sealant manufacturer for specific material, substrate and end use.
- 2.2.7 Firestop Insulation: to CAN/ULC-S702, Type 2; mineral fiber manufactured from rock or slag, suitable for manual application:
- .1 Density: 72 kg/m³ when tested to ASTM C303.
 - .2 Combustibility: Noncombustible to CAN/ULC-S114.

- .3 Melt Temperature: >1175 degrees C.
- .4 Surface Burning Characteristics: to CAN/ULC-S102, maximum flame spread of 0, smoke developed of 0.
- .5 Moisture Sorption: 0.04 percent when tested to ASTM C1104.
- .6 Smoulder Resistance: 0.01 percent when tested to CAN/ULC-S129.

2.3 **Components**

- 2.3.1 Provide firestopping and smoke sealing systems to requirements of CAN4-S115-M and described below:
 - .1 Asbestos free materials and systems fully capable of maintaining an effective barrier against gases, flame and smoke in compliance with CAN4-S115-M, not exceeding opening sizes stated.
 - .2 Service Penetration Assemblies: certified by CAN4-S115-M and used by ULC Guide 40 U19. Service components listed as certified in this guide are noted under Label Service of ULC.
- 2.3.2 Fire resistance rating of fire stopping material assembly must meet or exceed the fire resistance rating of the floor and wall section being penetrated.
- 2.3.3 Firestopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal; do not use a cementitious or rigid seal at such locations.
- 2.3.4 Damming and back up materials, supports and anchoring devices shall be to manufacturer's recommendations, and in strict accordance with tested assembly being installed as acceptable to authorities having jurisdiction.
- 2.3.5 Sealants: for vertical joints shall be non-sagging type.

3 **EXECUTION**

3.1 **Examination**

- 3.1.1 Confirm compatibility of surfaces to receive sealant materials.
- 3.1.2 Verify that surfaces of openings are sound, clean, dry and ready to receive application of sealant.
- 3.1.3 Verify that penetration elements are securely fixed and properly located.
- 3.1.4 Commencement of installation means acceptance of existing conditions.

3.2 **Preparation**

- 3.2.1 Protect adjacent surfaces and equipment from damage.
- 3.2.2 Clean contact surfaces of dirt, dust, grease, oil, loose material, or other matter which may affect bond of sealant.
- 3.2.3 Remove incompatible materials which affect bond by scraping, brushing, water or solvent cleaning, or sandblasting.

3.3 Application

- 3.3.1 Install mineral fiber insulation in compacted thicknesses required by ULC design. Compress insulation approximately 33 percent.
- 3.3.2 Apply sealant in strict accordance with manufacturer's instructions and ULC certification.
- 3.3.3 Coordinate and cooperate with adjacent, contiguous and related materials trades, such as concrete, drywall, plumbing, conduit, electrical wiring, communication systems, etc., to ensure a proper and timely installation.
- 3.3.4 Seal holes or voids made by penetrating items to ensure an effective fire and smoke barrier.
- 3.3.5 Seal all intersections and all penetrations of floors, ceilings, walls and columns.
- 3.3.6 Seal around all cutouts for lights, cabinets, pipes and plumbing, ducts, electrical boxes, etc.
- 3.3.7 Wrap non-insulated heated pipes that may be subject to movement with a non-combustible smooth material to permit the pipe to move without damaging the firestopping and smoke seal.
- 3.3.8 Maintain the integrity of any insulation and vapour retarders on insulated pipes and ducts at the fire separation.
- 3.3.9 Where floor openings exceed 100mm in width and may be subjected to traffic or loading, install cover late systems capable of supporting same loading as floor.

3.4 Field Quality Control

- 3.4.1 Perform field testing and inspection.
- 3.4.2 Examine finished penetrations to ensure proper installation before concealing or enclosing any areas of Work.
- 3.4.3 Keep areas of Work accessible until inspection has been completed.
- 3.4.4 Manufacturer's Field Service: inspect to verify and confirm that systems installation is in strict accordance with manufacturer's and ULC requirements.
- 3.4.5 Correct unacceptable work and provide further inspection to verify compliance with requirements.

3.5 Cleaning

- 3.5.1 Immediately remove all spots, smears, stains, residues, adhesives, etc., from the Work of this Section and from upon adjacent areas or surfaces which resulted from the Work of this Section.
- 3.5.2 Upon completion of the Work of this Section, remove from site all debris, trash, containers, residue, remnants and scraps which result from the Work of this Section.
- 3.5.3 Cleaning to be free of volatile solvents. Leave the Work in a clean and satisfactory condition.

3.6 Protection

- 3.6.1 After installation, and until Agency occupancy, protect the rated firestop systems from damage.

3.6.2 Make Good damaged firestop assemblies.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Remove sealant from existing joints indicated and clean joints.
- 1.2.2 Seal all areas indicated on Drawings, in list following, and where required to seal penetrations:
- .1 Both sides of hollow metal frames.
 - .2 All pipes, grilles and equipment passing through walls.
 - .3 Joint where two different materials abut.
 - .4 Plumbing fixtures.
 - .5 Fire Stopping at all penetrations through fire rated walls and floor assemblies with ULC approved systems.
 - .6 The perimeter of housekeeping concrete pads for mechanical and electrical equipment.
- 1.3 **Related Sections**
- 1.3.1 Sealant related to:
- .1 Section 09 67 00, Fluid Applied Flooring.
 - .2 Section 07 84 00, Fire Stopping.
- 1.4 **Quality Assurance**
- 1.4.1 Installation of sealant and caulking work shall be carried out by a recognized specialized applicator having skilled mechanics, thoroughly trained and competent in all phases of caulking work, and a member in good standing of the Caulking Contractor's Association of Ontario.
- 1.4.2 Submit product data and samples of sealant and backing, for Consultant's approval.
- 1.4.3 Submit manufacturer's data, tests and information.
- 1.4.4 A representative of the sealant material manufacturer shall be present when sample is applied, and visit the site during application to ensure that all Work is carried out according to the manufacturer's printed instruction. Manufacturer representative shall attend meeting with Sub-contractor, consultant and installer.
- 1.4.5 Submit written statement of products to be used for each application from the selected sealant manufacturer prior to commencing the application.
- 1.5 **Reference Standards**
- 1.5.1 CGSB Specification CAN/CGSB-19.13-M87 ASTM C.920 Type S Grade NS, Class 25, use NT, M, A, O one component, elastomeric,
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chemical curing.

- 1.5.2 CGSB Specification CAN/CGSB-19.24-M90 Type 2 Class B and ASTM C920 Type M Grade NS, Class 25, use NT, M, A and O.

1.6 **Rejections**

- 1.6.1 Defective materials or quality of Work whenever found at any time prior to final acceptance of the Work, shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight and error. Remove and replace defective materials, and the Work of other trades affected by this replacement, at no additional cost.

1.7 **Examination**

- 1.7.1 Report to the Consultant, in writing, defects of surfaces or Work prepared by other trades and unsatisfactory site conditions.
- 1.7.2 Commencement of Work implies total acceptance of surface and site conditions.
- 1.7.3 Thoroughly examine surfaces scheduled to receive sealants to ensure that they are dry, clean, level; free from cracks, ridges, dusting, scaling, carbonation, mortar droppings, parging, curing compounds, rust, grease, oil, paint or other foreign material likely to impair adhesion, performance or appearance.
- 1.7.4 Test substrate for adhesion and staining if any doubt exists.

1.8 **Delivery, Storage and Handling**

- 1.8.1 Deliver and store materials in undamaged and original containers, with labels intact and showing the manufacturer's name, brand, colour, etc.
- 1.8.2 Ensure material at time of use is still within recommended shelf life.
- 1.8.3 Maintain storage area at a temperature in accordance with manufacturer's recommendations.

1.9 **Guarantee**

- 1.9.1 Provide written guarantee of Work of this Section against delamination, cracking, running, loss of adhesion, blistering, peeling, colour change and staining for a period of two (2) years from the date of Completion.
- 1.9.2 Provide Manufacturer Warranty for a period of ten (10) years from date of Completion.

2 **PRODUCTS**

2.1 **General**

- 2.1.1 Use 600ml sausage packs instead of cartridge tubes whenever possible.
- 2.1.2 Materials shall be new and in perfect condition, free from defects impairing physical or appearance performance, and shall meet requirements of applicable C.G.S.B. specifications. Surfaces to receive sealants to be dry, clean and free of contaminants.

2.2 Materials

- 2.2.1 Refer to Suggested Sealant Selection chart that follows at end of this Section.
- 2.2.2 Sealing Around Piping, Ductwork, Conduit, Etc. Passing Through Fire Rated Walls & Floors:
- .1 Sealant: One-part silicone elastomer.
 - .2 Pensil 851 by General Electric Silicones.
 - .3 Fire stop No. 2000 by Dow Corning.
 - .4 Tremstop Fyre - Sil by Tremco.
 - .5 Fire stop by Hilti – specific to each application.
- 2.2.3 Sealing Around Multiple Cables & Conduits Passing Through Fire Rated Walls & Floors:
- .1 Sealant: Two-part silicone elastomer.
 - .2 Fire stop foam No. 2001 manufactured by Dow Corning.
 - .3 CS-SL-SA and sealant by Hilti.
- 2.2.4 Acoustical Caulking:
- .1 Sealant: Blend of synthetic rubbers.
 - .2 Use: Acoustical caulking around perimeter of partitions and electrical boxes, panels, etc. & openings in partition systems requiring acoustical treatment in locations as follows:
 - .3 Non-hardening acoustical sealant by Tremco.
- 2.2.5 Thinners and Primers: Type compatible with appropriate sealant and substrate as recommended by manufacturer.
- 2.2.6 Cleaning material: As recommended by manufacturer.
- 2.2.7 Joint backing material: Preformed, compressible, resilient, non-staining foam compatible with primers, sealants, outsize 30 percent (%), polyethylene, extruded closed cell foam, Shore "A" hardness 20, tensile strength 20-30 psi, such as PRC Backer Rod or equal. Outsize 50%, polyethylene, extruded open cell foam, Shore "A" hardness 10, tensile strength 140-150 psi, such as PRC open cell.
- 2.2.8 Bond breaker: Where joint configuration does not allow for proper depth/width ratio with the use of backer rod (see Section 3.2.5.) - a pressure sensitive plastic tape such as 3M #226 or #481 which will not bond to the sealant shall be placed at the back of the joint.
- 2.2.9 Sealant colours shall be selected by the Consultant from manufacturer's standard selection.

3 EXECUTION**3.1 Examination and Protection**

- 3.1.1 Verify at the site that joints and surfaces have been provided as specified under the Work of other sections; and that joint conditions will not adversely affect execution, performance or quality of completed work; and that they can put into acceptable condition by means of preparation specified in this section.
- 3.1.1 Ascertain that sealers and coatings applied to sealant substrates are compatible with sealant used and that full bond between the sealant and substrate is attained.
- 3.1.2 Request samples of the sealed or coated substrate from their fabricators for testing of compatibility and bond if necessary.

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- 3.1.3 Verify that specified environmental conditions are ensured before commencing Work.
 - 3.1.4 Ensure that releasing agents, coating or other treatments have either not been applied to joint surfaces or that they are entirely removed.
 - 3.1.5 Defective work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the Work of this section.
 - 3.1.6 Protect the Work of other trades from damage resulting from Work of this trade; make good any resulting damage, to the satisfaction of the Consultant, at no additional cost.

3.2 **Preparation**

- 3.2.1 Remove dust, paint, loose mortar and other foreign matter and dry joint surfaces.
- 3.2.2 Remove dust, silt, scale and coating from ferrous metals by wire brush, grinding or sandblasting.
- 3.2.3 Remove oil, grease and other coating from non-ferrous metals.
- 3.2.4 Prepare concrete, masonry, glazed and vitreous surfaces as recommended by sealant manufacturer.
- 3.2.5 Examine joint sizes and correct to achieve proper width/depth ratio.
- 3.2.6 For joints wider than 50.8mm (2"), the sealant manufacturer's representative shall be contacted.
- 3.2.7 Install backer rod or apply bond breaker tape to achieve correct joint configuration.
- 3.2.8 Where necessary to prevent staining, mask adjacent surfaces with tape prior to priming and/or caulking.
- 3.2.9 Prime sides of joint in accordance with manufacturer's directions, immediately prior to sealing.
- 3.2.10 Before any caulking or sealing is commenced, a test of the material shall be made for indications of staining or poor adhesion.
- 3.2.11 At locations where another surface will cover the sealed joint (e.g. cove base) ensure the sealant is finished flush with adjacent surfaces.

3.3 **Quality of Work**

- 3.3.1 Quality of work shall be in accordance with good practice and in strict compliance with the recommendations of the manufacturer of materials being used.
- 3.3.2 Check work area for adequate light and heat.
- 3.3.3 Carefully mask adjacent surfaces, materials and items not scheduled to receive sealant, taking care to see that masking remains intact until application is complete. Remove masking immediately upon completion of caulking.
- 3.3.4 Do not apply sealant to substrate until thoroughly cured and dried.

3.4 **Application**

- 3.4.1 Prime sides of joints before placing joint backing. Use bond breaker where joint backing not required.

-
- 3.4.2 Sealant Application: Refer to Suggested Sealant Selection chart at end of Section.
 - 3.4.3 Mix and apply sealant in strict accordance with manufacturer's directions and under supervision of manufacturer's field representative.
 - 3.4.4 Sealants shall be of gun grade or knife grade consistency to suit joint condition.
 - 3.4.5 Apply sealants in accordance with manufacturer's directions, using a gun with proper size nozzle. Use sufficient pressure to fill voids and joints solid.
 - 3.4.6 Form surface of the sealant with full bead, smooth, free from ridges, wrinkles, sags, and embedded impurities. Neatly tool surface to a slight concave joint.
 - 3.4.7 Clean adjacent surfaces immediately and leave work neat and clean. Remove excess and droppings using recommended cleaners as Work progresses. Remove masking tape immediately after tooling of joints.
 - 3.4.8 In masonry cavity construction with an air seal, vent sealed joints from cavity to beyond external face of wall.
 - 3.4.9 Superficial pointing with the skin bead is not acceptable.
 - 3.4.10 Provide test results of pull test performed by the manufacturer representative before completion of sealant work.
 - 3.4.11 Promptly, as the Work proceeds and upon completion, clean-up and remove from the site all masking tapes, rubbish and surplus material resulting from Work of this trade to the satisfaction of the Consultant.
 - 3.4.12 Apply when in conformance with manufacturer's recommended temperature and humidity.
 - 3.4.13 Ensure adequate ventilation during installation.

Suggested Sealant Selection Guide (Tremco), or equivalent

This guide should only be used as a guide. Reference the Data Sheet for more specific information and/or consult your local Tremco Representative or Technical Services.

Chemistry	Vulklen 116	Dymonic 100	Dymeric 240FC	Dymonic FC	Spectrum 1	Spectrum 2	Spectrum 3	Spectrum 4TS	Trensil 600	Proglaze SSG	Proglaze II	Butyl Sealant	Acoustical Sealant	Tremco B90
	U	U	U	H	S	S	S	S	S	S	S	B	B	T
Non-Sag or Pourable	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Single or Multi Component	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Movement Capability	±2.5%	1.00/-50%*	±50%*	±35%	1.00/-50%	±50%*	±50%*	±50%*	±25%	±25%	±2.5%	up to ±1.0%	NS	±12.5%
Masonry:														
Poured Concrete	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cast-in-Place / Tilt-up	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CMU Block	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Brick	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Natural Stone	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Stucco	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Reservoir**	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Metals:														
Curtain Walls	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Flashing	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Sidings	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Window & Door Perimeters	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EFS														
Vinyl and Plastics	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Green and Damp Concrete	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Glass	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wood	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Drywall (Gypsum) / Metal Stud Partition	•	•	•	•	•	•	•	•	•	•	•	•	•	•
General Glazing														
Toe Bead	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Heel Bead	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cap Bead	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Weather Seal	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bedding	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Structural Glazing														
Tensile Bead 2-sided	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tensile Bead 4-sided	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Protective Glazing														
Hurricane / Impact	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bomb Blast	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tub and Tile / Sanitary														
Jet Fuel Resistance	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* Modified ASTM C719
** For use in non-treated, non-potable water
For priming recommendations, please contact Tremco Technical Services or reference the Primer Guide.

Non-Sag or Pourable:
NS = Non-Sag
P = Pourable

Single or Multi-Component:
S = Single-Component
M = Multi-Component

Legend:
U = Urethane
H = Hybrid
S = Silicone
B = Butyl
T = Thermoplastic

**Regional Municipality of Peel
Purchasing Division**

**Document 2020-546P
LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL**

**Specifications
Section 07 90 00
Joint Sealers**

END OF SECTION

- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 At Malton Village (For Scope #3 – Staff Room), supply new hollow metal door and frame complete with new glazing as indicated on Drawing (A1-2) and door schedule.
- 1.2.2 Supply door hardware.
- 1.3 **Related Work**
- 1.3.1 Section 09 29 00, Gypsum Board.
- 1.3.2 Section 09 90 00, Painting.
- 1.4 **Reference Documents**
- 1.4.1 NFPA-80.
- 1.4.2 Ontario Building Code 2012.
- 1.5 **Submittals**
- 1.5.1 Shop Drawings:
- .1 Submit three hard copies of the Shop Drawings for the Consultant's review, indicating type of door, material, steel core thickness, mortises, reinforcements and glazed openings and details.
- .2 Include schedule identifying each unit, with door marks and numbers relating to numbering on Drawings.
- .3 Indicate hardware mounting heights.
- 1.6 **Warranty**
- 1.6.1 Materials and quality of Work shall be warranted by Manufacturer in accordance with the Canadian Steel Door and Frame Manufacturer's Association (CSDFMA) member's standard warranty for steel doors and frames.
- 1.7 **Quality Assurance**
- 1.7.1 Supply material manufactured to standards of Canadian Steel Door and Frame Manufacturers Association (CSDFMA) "Canadian Metric Guide for Steel Doors and Frames" (Modular Construction).
- 1.7.2 Fire rated doors, frames, glazing stops and fire door hardware shall bear U.L.C. labels. Refer to Architectural Drawings for location of fire rated assemblies.
- All hollow metal Work in fire separations and fire walls shall be
-

fabricated and installed in accordance with NFPA 80 - latest edition Standard for Fire Doors and Windows, and CAN4-S104.

1.8 **Rejections**

- 1.8.1 Defective materials whenever found at any time prior to final acceptance of the Work shall be rejected regardless of previous site review. Site review will not relieve Contractor from responsibility but is a precaution against oversight and error.
- 1.8.2 Remove and replace defective materials and Work of other trades affected by this replacement at no additional cost to the Agency.

2 **PRODUCTS**

2.1 **Doors**

- 2.1.1 All and only steel doors and frames product manufactured by Canadian Steel Door and Frame Manufacturer's Association (CSDFMA) members are eligible for use on this project.
- 2.1.2 Interior door faces: 18 Gauge base thickness as Commercial grade steel to ASTM A568-01, Class 1, hot-dip galvanized to ASTM A653-01A, coating designation to ASTM A653-01A, ZF75 (A25), known commercially as "Colourbond", "Satincoat" or "Galvanneal". Minimum base steel thickness shall be as per Table 1 / CSDFMA.
- 2.1.3 Standard interior grade with honeycomb core, galvalume finish.

2.2 **Frames**

- 2.2.1 Frames to be 16 Gauge base thickness steel, G90 galvanized, thermally broken.
 - 2.2.2 Frames shall be blanked, reinforced, drilled and tapped for mortised, templated hardware minimum steel thickness.
 - 2.2.3 Mortised cutouts shall be protected with steel guard boxes minimum steel thickness 18 Gauge.
 - 2.2.4 Frames shall be reinforced, where required, for surface mounted hardware. Drilling and Hardware reinforcing minimum steel thickness 10 Gauge, tapping is by others, on site, at time of installation.
 - 2.2.5 Provide for appropriate anchorage to floor and wall construction. Each wall anchor shall be located immediately above or below each hinge reinforcement on the hinge jamb and directly opposite on the strike jamb. For rebate opening heights up to and including 1524mm (60") provide two anchors, and an additional anchor for each additional 762mm (30") of height or fraction thereof, except as indicated below.
 - 2.2.6 Frames in previously placed concrete masonry or structural steel shall be provided with anchors located not more than 152.4mm (6") from the top and bottom of each jamb, and intermediate anchors at 660.4mm (26") on centre maximum. Minimum anchors steel thickness six (6) Gauge.
 - 2.2.7 Each door opening shall be prepared for single grey or black stud neoprene door silencers, three for single door openings, two for
-

- double door openings.
- 2.2.8 Provide factory-applied touch up primer at areas where zinc coating has been removed during fabrication.
 - 2.2.9 Corrugated Steel Frame Tee Anchors: Thickness and design approved by ULC.
 - 2.2.10 Glazing Stops-Non-Fire Rated Doors and frames: Minimum 20 Gauge base thickness sheet metal with zinc finish as per door, tamperproof on exterior doors, screw fixed on interior doors.
 - 2.2.11 Reinforcing Channel: To CSA G40.21-M, type 300W.
 - 2.2.12 Frame Thermal Breaks: rigid polyvinylchloride extrusion conforming to CGSB 41-GP-19Ma.
 - 2.2.13 Top Caps: rigid polyvinyl chloride extrusion conforming to CGSB 41-GP-19 Ma.
 - 2.2.14 Specialty Trims: "J" shaped electrogalvanized steel trims, to cover cut ends of concrete blocks where new doors cut into existing walls. Custom shape and size trims to suit door and wall conditions.

2.3 **Fabrication**

- 2.3.1 Fabricate doors, panels, screens and frames as detailed in accordance with Canadian Steel Door and Frame Manufacturers Association, "Specifications for Commercial Steel Doors and Frames", for insulated, hollow steel and honeycomb core construction, except where specified otherwise.
- 2.3.2 Grind welded corners and joints to flat plane, fill with metallic paste filler and sand to uniform smooth finish.
- 2.3.3 Close top of interior doors with PVC caps.
- 2.3.4 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by finish hardware supplier.
- 2.3.5 Doors shall have edge seams mechanically interlocked, adhesive assisted. Seams may be unfilled and visible.
- 2.3.6 Make provision for glass where indicated and provide glazing stops.
- 2.3.7 Protect strike and hinge reinforcements using guard boxes welded to frames.
- 2.3.8 Weld in two channel spreaders per frame, to ensure proper frame alignment.
- 2.3.9 Provide for anchorage of frames to floors. Provide 16 gauge angle clips, with two holes for floor anchorage welded to frame.
- 2.3.10 Reinforce head of frames wider than 1219.2mm (4' - 0").
- 2.3.11 Provide frames with manufacturer's proprietary anchorage system suitable to secure frame rigidly to wall assembly. Secure frames set into previously constructed concrete or masonry openings by countersunk expansion bolts at same centres as for adjustable Tee-anchors. Reinforce frame at fastening location to prevent indentation of frame by fastening device.
- 2.3.12 Construct rail and stile doors in same manner as flush doors.
- 2.3.13 Chemically treat surfaces of plain steel doors and frames and apply one coat of primer.
- 2.3.14 Install three bumpers on strike jamb for each single door and two

bumpers at head for pairs of doors.

3 **EXECUTION**

3.1 **Glazing**

3.1.1 Provide glazed units 6mm tempered glass. Sizes to be site measured.

3.2 **Painting**

3.2.1 Back paint hollow metal frames with Tremco "Instant Patch".

3.2.2 Provide primer and two finish coats of Semi-Gloss Acrylic Paint for new doors and frames. Colour to be advised by Consultant.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Supply of wood doors (for Scope 1 and Scope 5). Refer to Door Schedule.
- 1.3 **Related Sections**
- 1.3.1 Section 06 10 00 General Trades: installation of wood doors and finish hardware.
- 1.3.2 Section 08 70 00 Finish Hardware: door hardware.
- 1.3.3 Section 09 90 00 Painting and Finishing: field finishing of doors.
- 1.4 **References**
- 1.4.1 ANSI A208.1-99: Particleboard.
- 1.4.2 Architectural Woodwork Manufacturers Association of Canada (AWMAC): Quality Standards for Architectural Woodwork.
- 1.4.3 CAN/CSA-O132.2 Series-90: wood Flush Doors.
- 1.4.4 Underwriters Laboratories of Canada: List of Equipment and Materials.
- 1.5 **Submittals**
- 1.5.1 Submit Shop Drawings to requirements of Section 01 30 00, Instructions to All Trades.
- 1.5.2 Shop Drawings: Indicate door elevations and prepare for hardware.
- 1.6 **Quality Assurance**
- 1.6.1 Conform to requirements of AWMAC Quality Standard – Architectural Grade.
- 1.6.2 Installed Doors to conform to National Fire Protection Association requirements for fire rated class indicated in schedule.
- 1.7 **Delivery, Storage and Handling**
- 1.7.1 Pile doors flat on level supports to prevent warping.
- 1.7.2 Protect face of first door unit by placing plywood or cardboard between supports and door. Cover the top door unit in a similar manner.
- 1.7.3 Store doors in a dry, well-ventilated area. Doors stored for an extensive period of time shall have top and bottom edges sealed.
-

- 1.8 **Warranty**
1.8.1 Provide a three year extended warranty under the Contract.
1.8.2 Warranty: include coverage of warping beyond installation tolerances indicated in this Section, and delamination or degradation of veneer.
- 2 **PRODUCTS**
2.1 **Manufactured Units**
2.1.1 Masonite Architectural - Cendura™ Series | Mohawk; Hollow Core Wood Veneer Door.
- 2.2 **Components**
2.2.1 44.45mm (1-3/4") thick stile and rail kraft paper honeycomb reinforcement for hardware as required.
2.2.2 Grade A Natural Birch Plain Sliced veneer, stain grade to Window and Door Manufacturers Association (WDMA) I.S.1A.
- 2.3 **Fabrication**
2.3.1 Prepare doors for hardware as specified.
- 3 **EXECUTION**
3.1 **Installation**
3.1.1 Installation by Section 06 10 00, General Trades.

END OF SECTION

-
- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Supply of finishing hardware. Contractor to include for installation of the list below in the bid price.
- 1.2.2 Indicate unit prices and separate prices on bid form as described.
- 1.3 **Related Work**
- 1.3.1 Installation of Hardware – Section 06 10 00, General Trades.
- 1.3.2 Door Schedule – see Architectural Drawings (A2-1 to A2-8).
- 1.4 **Submittals**
- 1.4.1 **Hardware Schedule**
- .1 Requirements for Shop Drawings submission are described in Section 01 30 00, Instructions to All Trades, specifically provide the following:
Submit three hard copies of the hardware schedule for the Consultant's review, indicating each door and all items associated therewith.
- 1.5 **Warranty**
- 1.5.1 Materials and quality of Work shall be warranted by Manufacturer in accordance with the Canadian Steel Door and Frame Manufacturers Association (CSDFMA) member's standard warranty for steel doors and frames.
- 1.6 **Rejections**
- 1.6.1 Defective materials whenever found at any time prior to final acceptance of the Work shall be rejected regardless of previous site review. Site review will not relieve Contractor from responsibility but is a precaution against oversight and error.
- 1.6.2 Remove and replace defective materials and Work of other trades affected by this replacement at no additional cost to the Agency.

2 **PRODUCTS**

2.1 **Hardware Group No. 01 – Closet Doors**

(34.9mm doors, up to 125 pounds)

2.1.1 (One per pair of doors) C-538-W KIT (C-400 HANGER, C-538 TRACK, C-914/C-913D-138 Guide System).

.1 Includes:

One (1) C-538 Top Mount Double Track.

Four (4) C-400 Hanger Body.

Four (4) C-400 Top Plate.

Four (4) CDC-400 Catch / Stop.

Two (2) C-914 Guide Channel.

One (1) C913D-138 By-Pass Double Guide.

Two (2) Rockwood BF97L; recessed door pull by ASSA ABLOY. Stainless Steel 127mm x 127mm (5" x 5").

2.2 **Hardware Group No. 02 – Private Washroom Doors (Separate Price)**

2.2.1 Existing doors to be reused. Existing floor guide to remain.

2.2.2 One (1) CC-404 Top Mount Track.

Two (2) CC-410 Zero Clearance Catch'n'Close Hangers.

Two (2) CC-1 Catch'n'Close Closing Devices.

Two (2) CC-100 Catch'n'Close In-track Stops.

2.3 **Hardware Group No. 03 – Shared Washroom Doors (Separate Price)**

2.3.1 Existing doors to be reused. Existing floor guide to remain.

2.3.2 One (1) CC-404 Top Mount Track.

Two (2) CC-410 Zero Clearance Catch'n'Close Hangers.

Two (2) CC-1 Catch'n'Close Closing Devices.

Two (2) CC-100 Catch'n'Close In-track Stops.

2.4 **Hardware Group No. 04 – Hollow Metal Door**

2.4.1 Provide the following hardware:

.1 Three hinges: 5BB1 HW 127mm x 114mm NRP; Finish 630, Manufacturer IVE.

.2 One storeroom lock: B581P QUA; Finish 626, Manufacturer FAL.

.3 One surface closer: SC61A DS; Finish 689, Manufacturer FAL.

2.5 **Hardware Group No. 5 – Malton Village Exterior Doors**

2.5.1 The new door hold open at the Malton Village five exit doors (S1, A, B, C and D) shall be:

1 Each - DOOR CLOSER, 4040XP SHCUSH 689 LCN.

2.5 **Materials**

2.5.1 Provide new materials in perfect condition, free from defects impairing strength, durability or performance.

2.5.2 Refer to the Architectural plans for location and required quantity of items specified.

3 **EXECUTION**

3.1 **Installation**

3.1.1 Refer Section 06 10 00, General Trades.

END OF SECTION

1 **GENERAL**

1.1 **Instructions**

- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.

1.2 **Section Includes**

- 1.2.1 Metal stud wall framing and channel ceiling framing, and wall furring.
- 1.2.2 Gypsum board, including moisture-resistant, fire-rated and non-rated types.
- 1.2.3 Resilient channel.

1.3 **Related Sections**

- 1.3.1 Section 06 10 00, General Trades: wood blocking.
- 1.3.2 Section 09 90 00, Painting & Finishing: site finishing.

1.4 **References**

- 1.4.1 ASTM C36/C36M-01: Standard Specification for Gypsum Wallboard.
- 1.4.2 ASTM C442/C442M-01: Standard Specification for Gypsum Backing Board, Gypsum Coreboard, and gypsum Shaftliner Board.
- 1.4.3 ASTM C475-01: Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- 1.4.4 ASTM C514-01: Standard Specification for Nails for the Application of Gypsum Board.
- 1.4.5 ASTM C630/C630M-01: Standard Specification for Water-Resistant Gypsum Backing Board.
- 1.4.6 ASTM C645-00: Standard specification for Nonstructural Steel Framing Members.
- 1.4.7 ASTM C840-01: Standard Specification for Application and Finishing of Gypsum Board.
- 1.4.8 ASTM C954-00: Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in thickness.
- 1.4.9 ASTM C1047-99: Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
- 1.4.10 ASTM C1178/C1178M-01: Standard Specification for Glass Mat Water-Resistant Gypsum Backing Panel.
- 1.4.11 ASTM C1278/C1278M-01: Standard Specification for Fiber-Reinforced Gypsum Panel.
- 1.4.12 ASTM C1280-99: Standard Specification for Application of Gypsum Sheathing.

- 1.4.13 Canadian Gypsum Company: Handbook of Drywall Construction.
- 1.4.14 CAN/CGSB-71.25-M88: Adhesive, for bonding Drywall to Wood Framing and Metal Studs.
- 1.4.15 Underwriters Laboratories of Canada: List of Equipment and Materials.

1.5 **Quality Assurance**

- 1.5.1 Applicators: company specializing in applying the Work of this Section with a minimum of five years documented experience.

2 **PRODUCTS**

2.1 **Manufacturers**

- 2.1.1 Manufacturers of gypsum board having Product considered acceptable for use:
 - .1 BPB.
 - .2 Canada Gypsum Company.
 - .3 G-P Gypsum Corporation.

2.2 **Framing Materials**

- 2.2.1 Studs and Tracks: to ASTM C645, 0.55 mm thick galvanized sheet steel, 'C' shape, with serrated faces. Provide knock-outs for electrical trades.
- 2.2.2 Furring, Framing and Accessories: to ASTM C645, galvanized steel channel sections designed to perform their intended function.

2.3 **Gypsum Board Materials**

- 2.3.1 Gypsum Board: to ASTM C36; tapered edges, ivory faced.
- 2.3.2 Fire Rated Gypsum Board: to ASTM C36, Type X; tapered edges, ivory faced, ULC labeled.

2.4 **Accessories**

- 2.4.1 Nail Fasteners: galvanized steel; to ASTM C514.
- 2.4.2 Steel Drill Screws: galvanized steel: to ASTM C954.
- 2.4.3 Adhesive: to CAN/CGSB-71.25-M.
- 2.4.4 Joint Materials: to ASTM C475; reinforcing tape, joint compound, adhesive, water, fasteners.
- 2.4.5 Corner Beads, Casing Beads and Edge Trim: to ASTM C1047; PVC type.

2.5 **Access Panel**

- 2.5.1 Install 300mm x 300mm 16-gauge access panel where required for plumbing shut-offs and electrical junction boxes.

3 **EXECUTION**

3.1 **Examination**

- 3.1.1 Verify that site conditions are ready to receive Work.
- 3.1.2 Commencement of installation implies acceptance of site conditions.

3.2 **Metal Stud and Furring Installation**

- 3.2.1 Install studding to requirements of ASTM C840, and manufacturer's instructions.
- 3.2.2 Metal Stud Spacing: 400mm on centre (OC).
- 3.2.3 Partition Heights: Full height to floor or roof construction above.
- 3.2.4 Erect furring for direct attachment to concrete block walls and concrete walls, ceilings and soffits.

3.3. **Ceiling Framing Installation**

- 3.3.1 Install to ASTM C840, and manufacturer's instructions.
- 3.3.2 Install ceiling framing independent of walls, columns, and above ceiling work.
- 3.3.3 Laterally brace entire suspension system.

3.4 **Board Installation**

- 3.4.1 Coordinate board installation with hollow metal frame installation. Grinding welded steel frames is not permitted.
- 3.4.2 Install gypsum board sheathing to ASTM C1280.
- 3.4.3 Install gypsum board to ASTM C840.
- 3.4.4 Screw fasten boards to furring or framing.
- 3.4.5 Double Layer Applications: Use gypsum backing board for first layer, place perpendicular to framing or furring members. Place second layer perpendicular to first layer.
- 3.4.6 Place corner beads at external corners. Place edge trim where gypsum board abuts dissimilar materials. Fasten with nail attachment, unless specified otherwise.
- 3.4.7 Finished Work shall be plane and free from all depressions, ready to receive paint finish by others.
- 3.4.8 Provide bulkheads where changes of ceiling or height occur. Include all necessary channel framing, etc.
- 3.4.9 Provide all furring required by the drawings or any furring necessary to conceal exposed pipes or ducts. Refer to mechanical and electrical Drawings to determine extent of Work necessary.

3.5 **Joint Treatment**

- 3.5.1 Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
- 3.5.2 Provide skim coat over entire wall surface and sand lightly ready for paint.

3.6 **Control Joints**

- 3.6.1 Provide control joints where indicated on Drawings and where gypsum board assemblies abut dissimilar construction.
- 3.6.2 Break continuity of gypsum board and framing system at control joints. Provide continuous metal control joint profile.

3.7 **Relief Joints**

- 3.7.1 Provide relief joints where indicated on the Drawings and where gypsum board assemblies abut dissimilar construction.
- 3.7.2 Stop gypsum board six (6) millimetres from abutting construction at dissimilar building elements, unless indicated otherwise. Fill 6mm joint with non-hardening sealant.
- 3.7.3 Provide a thermal break where gypsum board comes into contact with window frames. Adhere self-adhering tape to casing bead and compress during installation of gypsum board.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Intent**
- 1.2.1 Provide all articles, labour, materials, equipment, transportation, hoisting and incidentals noted, specified or required, to complete the Work of this Section.
- 1.3 **Related Sections**
- 1.3.1 Section 09 29 00, Drywall
- 1.3.2 Divisions 21, 22, 23 Mechanical – Refer to Mechanical Drawings.
- 1.4 **Section Includes**
- 1.4.1 Provide all Ceramic Tile and required accessories as indicated on the Drawings, room finish schedule, and colour schedule.
- 1.4.2 Provide floor leveler as necessary to achieve smooth transitions in areas where new slab meets existing.
- 1.4.3 Provide mortar bed as necessary to achieve slopes to floor drains in all locations where tile is to be installed; regardless of existing or new substrate.
- 1.5 **Samples**
- 1.5.1 Submit samples of all tiles in colours and/or types specified for review by the Consultant.
- 1.6 **Rejections**
- 1.6.1 Defective materials or quality of Work whenever found at any time prior to acceptance of the Work shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight and error.
- 1.6.2 Remove and replace defective materials and Work of other trades affected by this replacement, at no additional cost to the Agency.
- 1.7 **Performance**
- 1.7.1 Install tiles to comply with ANSI A 108.5 (80 percent (%) uniform bonding mortar contact between the tile and the substrate. 95 percent (%) uniform bonding mortar contact for exterior application).
- 1.7.2 Provide only those products that meet or exceed the performance standard of CAN/C.G.S.B 75.1 – M88, as follows:
- .1 Factor of sliding friction on a dry surface using a leather test surface to be 0.50.
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- .2 Factor of sliding friction on a wet surface using a leather test surface to be 0.60.
 - .3 Factor of sliding friction on a dry surface using a rubber test surface to be 0.70.
 - .4 Factor of sliding friction on a wet surface using a rubber test surface to be 0.65.
- 1.7.3 Provide only those products that meet or exceed the performance standards of the following ASTM designations:
- .1 C370-56 (1981): Standard Test Method for Moisture Expansion of Fired Whiteware Products.
 - .2 C372-61: Standard Test Method for Linear Thermal Expansion of Porcelain Enamel And Glaze Frits and Fired Ceramic Whiteware Products by the Dilatometer Method.
 - .3 C373-72 (1982): Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, And Apparent Specific Gravity of Fired Porous Whiteware Products.
 - .4 C424-80 (1985): Standard Test Method for Craze Resistance of Fired Glazed Whitewares By Autoclave Treatment.
 - .5 C483-66 (1981): Standard Test Method for Electrical Resistance of Conductive Ceramic Tile.
 - .6 C484-68 (1981): Standard Test Method for Thermal Shock Resistance of Glazed Ceramic Tile.
 - .7 C485-83: Standard Test Method for Measuring Warpage of Ceramic Tile.
 - .8 C499-78 (1984): Standard Test Method for Determining Facial Dimensions and Thickness of Flat, Rectangular Wall and Floor Tile.
 - .9 C501-84: Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
 - .10 C502-78 (1983): Standard Test Method for Wedging of Flat, Rectangular Ceramic Wall And Floor Tile.
 - .11 C609-81: Standard Test Method for Measurement of Small Colour Differences Between Ceramic Wall or Floor Tile.
 - .12 C648-84: Standard Test Method for Breaking Strength of Ceramic Tile.
 - .13 C1026-84: Standard Test Method for Measuring Frost Resistance of Ceramic Tile To Freeze Thaw Cycling.
 - .14 C1027-84: Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile.
 - .15 C1028-84: Standard Test Method for Evaluating the Static Coefficient of Friction of Ceramic Tile, and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method.

1.8 **Material, Storage and Handling**

- 1.8.1 Deliver and store all tile and required installation materials in original cartons, clearly marked as to type, colour and manufacturer.

- 1.8.2 Store materials in a warm, dry area.
- 1.8.3 This Tile Contractor will be responsible to ensure the timely arrival of installation materials on site and he will order the appropriate approved materials with sufficient lead time to ensure that no delays are incurred due to later material procurement.

1.9 **Guarantee**

- 1.9.1 The installer will guarantee installation of all ceramic tiles and floor assembly against defective material, discolouration, cracking, spalling and quality of work detrimental to the physical and aesthetic performance of this installation. Guarantee shall be for a period of one (1) year from the date of publication of the Certificate of Substantial Performance.
- 1.9.2 The manufacturer of the materials chosen for each “assembly” will provide a written guarantee that the products used on each assembly will be free from manufacturing defects so that these products will not breakdown or deteriorate for a period of five years from the date of the installation when installed in accordance with the manufacturers written specifications and guide lines.

1.10 **Cleaning and Protection**

- 1.10.1 Protect the ceramic tile work during the period of construction.
- 1.10.2 Remove all excess material and debris from the site and thoroughly wash and clean the tile work upon completion of the ceramic tile installation.
- 1.10.3 Protect the finish floor installation with a suitable and durable material or by keeping traffic off the floor until the area is ready for occupancy.

1.11 **Maintenance**

- 1.11.1 Submit three (3) copies of the manufacturer’s maintenance instructions, for ceramic floor and wall tile, to the Consultant upon completion of the ceramic installation.
- 1.11.2 Do not use muriatic acid for cleanup.

1.12 **Submittals**

- 1.12.1 Submit copies of manufacturer test and performance data for all tiles specified for the Consultant’s review. Do not commence Work until data sheets are reviewed.

1.13 **Schedule**

- 1.13.1 Ceramic tile as indicated on Drawings.

2 **PRODUCTS**

2.1 **Materials**

- 2.1.1 Provide new materials in perfect condition free from defects impairing performance and appearance.
- 2.1.2 **Ceramic Wall Tile:**

Size: 76.2mm x 254mm (3" x 10")

Type: Ceragres Liverpool

Colour: Argento

As manufactured by Ceragres or prior approved equal.

2.1.3 Wall Grout: Latex Grout ANSI 118.6 for Latex Portland Cement Grout. Colours to be selected by Consultant at later time.

2.1.4 Adhesives: Wall, Blockwall, Cement Backer Board, Drywall Laticrete 4237 Latex thin-set. Mortar additive mixed with Laticrete 211 Crete Filler power. (ANSI A118.4 for Latex Thinset Mortars).

2.1.5 Mortar bed: Use cementitious mortar bed laticrete 3701 wherever required to achieve slopes to floor drains.

3 **EXECUTION**

3.1 **Examinations**

3.1.1 Before starting the Work, examine existing surfaces to be covered and report to the Consultant, in writing, all defects of Work prepared by other trades and unsatisfactory existing conditions.

3.1.2 Do not commence until surfaces specified to receive tile are dry, clean, level: free from cracks, ridges, dusting, scaling, carbonation, mortar droppings, parging, curing compounds, grease, oil, or other foreign material liable to impair adhesion, performance or appearance.

3.1.3 Commencement of Work implies total acceptance of all surface conditions by this Ceramic Tile Contractor.

3.1.4 Dry or dusty concrete or masonry surfaces shall be wet down or washed and excess water removed just prior to the application of finish.

3.1.5 Waive the right to any after claims by failure to comply with the above procedure of examination.

3.2 **Breakage**

3.2.1 Make good any and all breakage resulting from faulty materials or installation.

3.3 **Quality of Work**

3.3.1 Ceramic tile application shall comply with Manual No. 200-1979 prepared by the Terrazzo, Tile and Marble Association of Canada, the Tile Council of America Handbook for Ceramic Tile Installation and ANSI Standards.

3.3.2 Provide 80 percent (%) uniform bonding mortar contact between the tile and the substrate for interior applications and 95% uniform bonding mortar for exterior application.

3.3.3 Install ceramic tiles over a "crack-free" substrate. All concrete joints or cracks should be in direct alignment with the tile expansion joints ("direct" being off 6.35mm (1/4") is not direct) ANSI Standards.

3.3.4 **Control Joints:**

.1 For interior ceramic tile the control joint should be placed every 4.8768 metres (16') – 6.096 metres (20') apart.

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- .2 All control joints should also be placed around perimeter, around columns and where tile abuts other hard materials. Control joints must always be placed directly over all slabe control and expansion joints.
- 3.3.5 Slopes:
- .1 Create slopes to drain in all areas to receive tile; remove existing mortar bed as necessary, and reinstall to new drain locations.
- 3.3.6 The ambient air temperature and structural base temperature should be no less than 13.33 degrees Celsius (56 Deg. F) during application of ceramic tile and during curing period. Epoxy mortars and grouts require temperature between 10 degrees Celsius (50 °F) and 32.2 degrees Celsius (90 8F).
- 3.3.7 Neatly cut tile around fitments, fixtures and drains. Form intersections, corners and returns accurately.
- 3.3.8 Make joints in tile uniform in width, subject to normal variance in tolerance allowed in tile size. Joints shall be watertight without voids, cracks, excess mortar, or grout. Joints between sheets to be of same width as joints between individual tiles.
- 3.3.9 All internal angles of base to be square. External angles to be bullnose. Bullnose to be from full size tile.
- 3.3.10 Where floor tile is required to be laid so floor slopes to drains it will be this Contractor's responsibility to ensure that the slopes are achieved and that no water ponds or lodges behind ridges. Use Laticrete 3701 Latex (or equal by Mapie) with 226 thick bed mortar mix for a five year warranty mortar bed. A site mix must be fortified with a latex admix.
- 3.3.11 Sound tile after setting; remove and replace hollow backed tile.
- 3.3.12 Allow minimum 24 hours after setting prior to grouting. Do not permit foot traffic for a minimum of 48 hours.
- 3.3.13 Completed Work shall be free of broken, damaged or faulty tile.
- 3.3.14 Carry out layout of tile in accordance with the Consultant's approved tile colour percentages and patterns.
- 3.3.15 Pattern to be uninterrupted through doorways.
- 3.3.16 All tiles should be fully embedded with at least 95% coverage of mortar on the back of tiles. 203.2mm x 203.2mm (8" x 8") tiles or larger will be installed with "back buttering to provide good adhesion".
- 3.4 Specific Installations
- 3.4.1 Refer to Drawings.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Intent**
- 1.2.1 Provide all articles, labour, materials, equipment, transportation, hoisting and incidentals noted, specified or required, to complete the Work of this Section.
- 1.3 **Section Includes**
- 1.3.1 At Sheridan Villa, remove and replace acoustic tiles in serveries to facilitate ductwork installation.
- 1.3.2 Provide all new acoustic tile and required accessories as indicated on the Working Drawings and room finish schedule.
- 1.4 **Related Sections**
- 1.4.1 Section 09 29 00, Gypsum Board.
- 1.4.2 Installation of Mechanical Grilles, Louvres, etc. Division 23 (refer to Drawings).
- 1.4.3 Installation of Electrical Equipment, Lights, etc. Division 26 (refer to Drawings).
- 1.5 **Samples**
- 1.5.1 Submit minimum 304.8mm x 304.8mm (1'-0 x 1'-0) samples of acoustic tile, as required for completion of the Work for the Consultant's review before proceeding with the acoustic tile Work.
- 1.5.2 Submit samples of acoustic products in type specified for approval by the Consultant.
- 1.6 **Rejections**
- 1.6.1 Defective materials or quality of Work whenever found at any time prior to acceptance of the Work shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight and error.
- 1.6.2 Remove and replace defective materials and Work of other Trades affected by this replacement, at no additional cost to the Agency.
- 1.7 **Performance**
- 1.7.1 Acoustic materials shall be Type 111, Class A according to Federal Specification SS-S118B.
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1.7.2 Suspension system shall comply with ASTM C636-86 "Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels".

1.7.3 Design and install the ceiling system to support the weight of the light fixtures, maximum deflection of 1/360 of the span. A letter shall be submitted by the Ceiling Contractor stating that the ceiling system is capable of supporting the light fixtures. This letter is required to obtain Ontario Hydro-Electric Commission approval.

1.8 **Delivery, Storage and Handling**

1.8.1 Deliver acoustic tile and materials in undamaged and original containers and make certain that the storage area is dry.

1.9 **Guarantee**

1.9.1 Guarantee the installation against defective material or quality of Work for a period of one year from the date of the publication of the Certificate of Substantial Performance.

1.10 **Cleaning and Protection**

1.10.1 Be responsible for protection of all materials and Work of this trade from damage during period of construction.

1.10.2 Be responsible for the protection of the Work of other Contractors (trades) from damage resulting from Work of this trade. This Contractor shall make good any resulting damage, to the satisfaction of the Consultant, at their own expense.

1.10.3 Promptly, as the Work proceeds and on completion, clean-up and remove from the premises all rubbish and surplus materials resulting from the foregoing work.

1.11 **Scope of New Materials**

1.11.1 If T-bars are broken or damaged, provide new to suit existing.

1.11.2 If acoustic tiles need to be replaced or added, supply whatever is needed to complete the ceiling installation in serveries.

1.12 **Extra Stock**

1.12.1 Furnish the Agency with two (2) percent extra stock of each type of ceiling tile to be used for future repair work.

2 **PRODUCTS**

2.1 **Materials**

2.1.1 Provide new materials in perfect condition, free from defects impairing physical and aesthetic performance.

2.2 **Acoustic Ceiling**

2.2.1 Acoustic ceiling to match existing.

3 EXECUTION**3.1 Examinations**

- 3.1.1 Report to the Consultant, in writing, all defects of Work prepared by other trades and on unsatisfactory site conditions.
- 3.1.2 Do not commence the Work of this Division until this Contractor has thoroughly examined all areas to receive an acoustic tile installation and has ascertained the compatibility of the installation of their material with the other trades involved directly or indirectly with this Work, and has found the areas in a condition suitable for the commencement.
- 3.1.3 Consult and co-operate with trades whose Work precedes or follows their Work to permit an orderly and effective procedure in the execution of the Work of this section.
- 3.1.4 Commencement of the Work of this Section implies total acceptance of all applicable conditions by the Acoustic Tile Contractor.
- 3.1.5 Waive the right to any after claims by failure to comply with the above procedure of examinations.

3.2 Quality of Work and Application

- 3.2.1 Install the tile and suspension system in accordance with the manufacturer's specifications using trades people with necessary training and experience certified by this manufacturer.
- 3.2.2 Plumb and square finish work with adjoining work.
- 3.2.3 Lay the Work out, in accordance with the Consultant's approved reflected ceiling plan, symmetrical with each area to obtain uniform borders of at least half the acoustic panel size.
- 3.2.4 Distribute variations in shades of finish from several cartons of panels uniformly over the ceiling area.
- 3.2.5 Erect the suspension system level with tolerance of 3.175mm (1/8") in 3.6576m (12').
- 3.2.6 Exposed main tees shall be as long in length as practical to minimize joints. Joints shall be tight, square flush, and reinforced with splines. Distribute jointing over the ceiling area.
- 3.2.7 Secure acoustic panel with hold-down clips in all locations.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or work prepared by other trades which affect the quality or dimensions of this Sub-contractor's work. Commencement of this Sub-contractor's work shall imply complete acceptance of all work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Removal of all existing flooring and adhesive.
- 1.2.2 Floor preparation for new flooring.
- 1.2.3 Resilient Sheet flooring.
- 1.2.4 Resilient Base.
- 1.2.5 Accessories.
- 1.2.6 Levelling of concrete surfaces to achieve slopes to drain.
- 1.3 **Submittals**
- 1.3.1 Samples: Submit samples of each type, color and finish of resilient flooring and accessory required, indication full range of color and pattern variation. Provide 152.4mm x 228.6mm (6"x9") samples of sheet flooring and 6" long samples of accessories.
- 1.3.2 Closeout Submittals: Submit three copies of Maintenance and Operations data including methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
- 1.3.3 Flame Spread Certification: Submit manufacturer's certification that resilient flooring furnished for areas indicated to comply with required flame spread rating has been tested and meets or exceeds indicated standard.
- 1.3.4 Replacement Material: After completion of work, deliver to project site replacement materials from same manufactured lot as materials installed, and as follows:
- .1 Sheet Flooring: Not less than 4.645 square metre (50 square feet) of each type, pattern and color installed.
- .2 Resilient Base: Not less than 3.048 metres (10 linear feet) for each 152.4 metres (500 linear feet) or fraction thereof of each different type and color installed.
- 1.3.5 Product Data: Submit three copies of manufacturer's technical data and installation instructions for each type of resilient flooring and accessory.
- 1.4 **Quality Assurance**
- 1.4.1 Installer Qualifications: Installer experienced in performing work of this section who as specialized in installation of work similar to that required for this project.
- 1.4.2 Regulatory Requirements: Provide products with the following fire-
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test response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities have jurisdiction.

- 1.4.3 Standard of Quality: For the purpose of evaluating the quality of workmanship, a mock up installation of the specified floor covering shall be provided by the Floor covering Contractor in an area designated by the Consultant. Upon approval, this test installation shall then be considered the standard of quality and basis of comparison for the balance of the project. Areas found to be deficient by specification standards or application procedures shall be repaired / replaced at Contractor's expense.
- 1.4.4 Defective materials or quality of Work whenever found at any time prior to acceptance of the Work shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight and error.
- 1.4.5 Remove and replace defective materials and Work of other trades affected by this replacement, at no additional cost to the Agency.

1.5 **Warranty**

- 1.5.1 Manufacturer's Warranty: Submit manufacturers standard warranty document.
Warranty Period: Five year limited warranty commencing on Date of Substantial completion.

1.6 **Delivery, Storage, and Handling**

- 1.6.1 Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- 1.6.2 Storage and Protection: Store materials protected for exposure to harmful weather conditions and at a temperature and humidity conditions recommended by manufacturer.
- .1 Materials should be stored in areas that are fully enclosed, weather tight with the permanent HVAC system set at a uniform temperature of at least 20 degrees Celsius (68°F) for 72 hours prior to, during and after installation.
- .2 The manufacturer recommends moving resilient floorcovering and installation accessories into spaces where they will be installed at least 48 hours before installation, unless longer conditioning periods are required by manufacturer in writing.

1.7 **Project Conditions**

- 1.7.1 Substrate Conditions:
The flooring Contractor must inspect and accept the substrate as prepared, or prepare the substrate to suit the manufacturer's recommendations. This includes creating level conditions with leveler, and repairs as necessary.
- 1.7.2 Environmental Requirements/Conditions: In accordance with manufacturer's recommendations. Areas to receive flooring shall be clean, fully enclosed, weather tight with the permanent HVAC set

at a uniform temperature of at least 20 degrees Celsius (68°F). The flooring material should be conditioned in the same manner.

- 1.7.3 Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.
- 1.7.4 Temperature Conditions: 20 degrees Celsius (68°F) for 72 hours prior to and during and for not less than 48 hours after installation.
- 1.7.5 Close spaces to traffic during resilient flooring installation and for time period after installation recommended in writing by the manufacturer.
- 1.7.6 Install resilient flooring material and accessories after other finishing operations, including painting, have been completed.

1.8 **Extra Stock**

- 1.8.1 Furnish the Agency with two percent extra stock of each type of floor tile to be used for future repair work.
- 1.8.2 Sheet Goods: Sort, bundle and tag all usable cuttings and leave with the Agency.

2 **PRODUCTS**

2.1 **Materials**

- 2.1.1 Provide new materials in perfect condition, free from defects impairing durability or appearance.
- 2.1.2 Floor leveler: Mapei "Ultra-Plan" or "Plani-Patch" as recommended by the manufacturer for the specific application.
- 2.1.3 For Scope #3 (Malton Village Staff Room): Altro Wood (measurements and product weights listed are approximate): Slip Resistance ASTM D2047 .79 Dry and .94 Wet; Thickness: 0.08" (2 mm); Roll Width: 6' 7" (2 m); Roll Length: 66' (20 m); Weight: 4.95 lbs/yd². Altro Wood uses a non-woven polyester/cellulose, glass fiber reinforcement. Colour: Farmhouse Oak – WSM2054. 2.1.4 Integrated sheet vinyl cove base.

2.2 **Accessories**

- 2.2.1 Including but not limited to:
 - .1 Vinyl welding rod: Acceptable material:
 - .1 Altro Weld Rod.
 - .2 Cove former: Acceptable material, sized to suit application:
 - .1 Altro Cove former 20R - 24 mm (1") radius.
 - .3 Gulley edge: Acceptable material, vinyl, sized to suit application:
 - .1 Altro Gulley.
 - .4 Cap strip: Acceptable material, sized to suit application, Vinyl
 - .1 Altro Cap Strip.
 - .5 Subfloor Filler and Leveler: Use only gray Portland cement-based "moisture tolerant" underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable.

- .6 Metal edge strips:
 - .1 Aluminum extruded, smooth, stainless steel with lip to extend over flooring.
- .7 Adhesives
 - 1. Leveling and Patching Compounds: Latex-modified, moisture resistant, silicate free, Portland cement based or blended hydraulic-cement-based formulation.
 - 2. Adhesives:
 - .1 Ecofix 20E.

3 **EXECUTION**

3.1 **Inspection**

- 3.1.1 Installer must examine areas and conditions under which resilient flooring and accessories are to be installed and must notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Agency and Consultant.

3.2 **Preparation**

3.2.1 Surface Preparation:

- .1 Remove sheet vinyl and adhesive and cove base from existing from surface.
- .2 General: Broom clean or vacuum surfaces to be covered and inspect subfloor. Start of flooring installation indicates acceptance of subfloor conditions and full responsibility for completed work.
- .2 Floor Substrate: Prepare floor substrate to be smooth, rigid, flat, level, permanently dry, clean and free of foreign materials such as dirt, paint, grease, oils, solvent, curing and hardening compounds, sealers, asphalt and old adhesive residue.
- .3 Remove old adhesive, ridges, and bumps to a smooth level surface. Fill low spots, cracks, joints, holes, and other defects, with sub-floor filler.
- .4 Perform calcium chloride moisture test, if requested, and submit results to Consultant.
- .5 Fill cavities, cracks, saw cuts and joints with an approved filler.
- .6 Install leveler as required to achieve slopes and levels indicated, and allow to cure for minimum 48 hours.
- .7 Pack around and under floor duct junction boxes and the like and fill recessed covers with latex to ensure flush level surface.
- .8 Cut and trim sheet vinyl flooring to fit neatly around fixed or excessively heavy objects. Seams shall be formed by overlapping and double-cutting or by scribing and cutting.

3.3 **Installation**

- 3.3.1 Adhesive Flooring Installation: Install flooring material following manufacturer's installation recommendations.
Follow manufacturer's recommendations for open and working time.
- .1 Adhesive Material Installation: Use trowel as recommended by flooring manufacturer for specific adhesive. Spread at a rate of approximately 13.94 square metres (150 square feet)/gallon as recommended by flooring manufacturer.
- 3.3.2 Installation Techniques:
- .1 Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture, including pipes, outlets, edgings, thresholds, nosing and cabinets.
- .2 Extend flooring into toe spaces, floor reveals, closets and similar openings.
- .3 Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers.
- .4 Adhere resilient flooring to substrate without producing open cracks, voids, raising and puckering at joints, telegraphing to adhesive spreader marks, or other surface imperfections in completed installation.
- .5 Use adhesive applied to substrate in compliance with flooring manufacturer's recommendations, including those for trowel notching, adhesive mixing and adhesive open and working times.
- .6 Roll resilient flooring as required by resilient flooring manufacturer.
- .7 Heat weld all seams.
- .8 Use leveler wherever sub-floor requires smoothing or patching.
- 3.3.3 Integrated Cove Base:
- .1 Install integrated cove base in all locations. Install threshold saddles on top of flooring at door openings where flooring material or level changes.
- .2 Install top set integrated cove base in accordance with manufacturer's recommendations. Set base in adhesive tightly against wall and floor surfaces. Space joints uniformly.
- .3 Accurately scribe around door-frames, fitments and other obstructions.
- .4 Install integrated cove base at all walls and built-in fitments, in rooms where base is indicated.
- .5 Form external corners and end stops from preformed units. Internal corners to be coped (not mitered) to produce a tight fit.
- 3.3.4 Sheet Goods:
- .1 Unroll sheet goods and allow to relax for at least 24 hours prior to installation.

- .2 Cement sheets parallel to longitudinal axis of room with joints symmetrically arranged. Abrupt variations in shade or pattern will not be permitted.
- .3 Minimize joints by using full width rolls where possible. Minimum width at edges of room shall be 609.6 millimetres (2'); minimum length between cross joints shall be 1.8288 metres (6'). Avoid concentrating cross joints in one area.
- .4 Double cut seams to produce square, straight, flat joints without gap. Joints shall be heat welds using welding rods.
- .5 Roll sheet vinyl immediately after laying, using clean polished roller weighting minimum of 100 pounds. To ensure adhesion and to remove air pockets. Roller and all point load objects must be kept off surface for 24 hours.
- .6 Install the integral base by rolling sheet vinyl up the wall. Use a fillet strip as back up to reinforce the flooring as it bends up the wall. Install a cap strip at the top of the base.
- .7 Sand bag double-cut seams for positive adhesion.
- .8 Lay and roll sheet vinyl within the time period recommended by the manufacturer for the recommended adhesive.

3.4 Field Quality Requirements

- 3.4.1 Manufacturer's Field Services: Upon Agency and Consultant's request, and with a minimum 72 hours' notice, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.5 Cleaning

- 3.5.1 Contractor to be responsible for performing initial maintenance to prepare flooring for occupancy following requirements based on procedures listed below.
- .1 Sweep or dust all floors.
Scrub floor using "Stride" neutral cleaner. Rinse floor thoroughly.
Apply two (2) coats of "Carefree" Matte-Satin finish. Allow 45 minutes between coats.
- 3.5.2 Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Perform initial maintenance on installed products in accordance with manufacturer's instructions, prior to Agency's acceptance. Remove construction site debris from project site and legally dispose of debris.
- .1 Remove visible adhesive and other surface blemishes using cleaning methods recommended by flooring manufacturer.
 - .2 Sweep / vacuum floor after installation.
 - .3 Do not perform initial maintenance for a minimum of five (5) days after installation has been completed. This is to allow the adhesive the proper time to set.

.4 Damp mop flooring to remove black marks and soil.

3.6 **Protection**

- 3.6.1 Protect installed product and finish surfaces from damage during construction. Remove and legally dispose of protective covering at time of Substantial Completion.
- 3.6.2 Protect the finished floor with suitable and durable material or by keeping traffic off the floor until the building or room is ready for occupancy.
- 3.6.3 Upon completion of work, remove equipment and debris resulting from the Work of this Section.

3.7 **Maintenance**

- 3.7.1 Furnish Agency with two copies of manufacturer's maintenance instructions.
- 3.7.2 Arrange with Agency to replace small furniture glides with suitable large glides or cups.

3.8 **Adjustments**

- 3.8.1 Work shall be examined approximately ten days after completion and all adjustment of defects made good.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Epoxy Floor Coating – troweled base.
- 1.2.2 Polyurethane flooring.
- 1.2.3 Concrete sealer.
- 1.3 **Related Sections**
- 1.3.1 Section 07 90 00, Joint Sealers.
- 1.4 **Quality Assurance**
- 1.4.1 The application of fluid applied flooring shall be carried out by approved applicators of Niagara Protective Coatings in accordance with manufacturer's current printed instructions.
- 1.4.2 Employ fully trained workers who are regularly employed in this field.
- 1.4.3 Arrange for testing of paint/coatings by product manufacturer. Obtain in writing from manufacturer representative, approval of surface preparation methods, and obtain reports that materials and application methods conform to specification.
- 1.5 **Samples**
- 1.5.1 Samples of standard colours and grit will be required, as directed by Consultant.
- 1.5.2 Do not proceed with general application until approval is given.
- 1.5.3 Mock-Up:
- .1 At site, Consultant will locate testing area to establish standard of workmanship, texture, gloss and coverage. Apply 300mm x 300mm (12" x 12") samples of each finish on each type of surface to be coated with correct material, number of coats, colour, texture and degree of gloss required or apply full size test samples in areas designated by Consultant of each finish on each type of surface to be coated with correct material, number of coats, colour, texture and degree of gloss required. Provide additional samples, if required, to obtain approval. Do not continue painting until samples have been approved. Approved panels shall become standard of comparison for painting work on site.
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1.6 **Rejections**

- 1.6.1 Defective materials or quality of work, whenever found, at any time prior to acceptance of the Work, shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight or errors.
- 1.6.2 Remove and replace defective materials and work of other trades affected by this replacement, at no additional cost to the Agency.

1.7 **Examination**

- 1.7.1 Report to the Consultant, in writing, all defects of surfaces or work prepared by other trades and on unsatisfactory site conditions.
- 1.7.2 Thoroughly examine all surfaces scheduled to receive paint to see that they are dry, clean, free from cracks, scaling, grease, oil, or other foreign materials liable to impair adhesion, performance or appearance. Take moisture readings.
- 1.7.3 Commencement of Work implies total acceptance of all surface conditions.

1.8 **Product Delivery, Storage, and Handling**

- 1.8.1 Deliver and store materials undamaged, in original containers, with Niagara Protective Coatings labels and seals intact.
- 1.8.2 Store materials in a single designated area having ambient temperature of a minimum of 15 degrees Celsius (59°F).

1.9 **Job Conditions**

- 1.9.1 Maintain minimum interior temperature of 18°C during application and drying of paint, and maintain until handover to Agency.
- 1.9.2 Do not paint when ambient air and surface temperatures are less than 15 degrees Celsius for 24 hours before or during painting application.
- 1.9.3 Adequately ventilate areas where coating is being applied. Maintain a reasonable dust-free atmosphere for duration of work.
- 1.9.4 Protect adjacent surfaces not scheduled to receive coating from damage.
- 1.9.5 Post "Wet Coating" signs and "No Smoking" signs while work is in progress and while coating is curing.
- 1.9.6 Erect suitable barriers to prevent traffic and other trades from working in areas during installation of coating.
- 1.9.7 Concrete must be cured for a minimum of 30 days prior to coating application.
- 1.9.8 Protect floor drains and block prior to application.

1.10 **Clean-Up**

- 1.10.1 Upon completion of the Work of this Section, remove from the site all surplus material and debris caused by the Work of this trade to the satisfaction of the Consultant.

- 1.11 **Guarantee**
1.11.1 Provide a written guarantee of Work of this Section against defects in material and quality of Work for a period of one (1) year from the date of publication of the Certificate of Substantial Performance.
- 2 **PRODUCTS**
- 2.1 **General**
2.1.1 Provide new materials in perfect condition, free from defects impairing physical performance and appearance.
2.1.2 No claim as to unsuitability or unavailability of any material specified, or unwillingness to use same, or inability to produce first class work with same will be entertained unless such claims are made in writing and submitted with proposal.
- 2.2 **Materials**
2.2.1 Epoxy Flooring (Refer to Drawings for locations):
.1 EPOXAL High Build single (1.5mm) Series 3004 System consisting of 100% solids epoxy primer, epoxy basecoat, #32 aggregate, epoxy grout coat and epoxy topcoat, Kromoquartz cove bases.
.2 All epoxy liquids shall be EPOXAL 100HP, 100% solids two component epoxy as manufactured by Niagara Protective Coatings.
.3 Troweled epoxy coves at all walls and concrete pedestals.
.4 Primers, thinners, fillers, patching kits, cleaning agents and equipment as per Niagara Protective Coatings.
2.2.2 Polyurethane Flooring - for Kitchen areas, except freezer (Refer to Drawings for locations):
.1 BASF Ucrete DP System Heavy Duty Polyurethane
.1 Basecoat: URETE BC 6 (for 6mm);
.2 Aggregate: MasterTop F25 (for Ucrete DP 30).
.3 Topcoat: UCRETE Topcoat
.4 Coving material: MasterEmaco 2525 filled with MasterTop filler F5.
.5 Sealant: MasterSeal CR 435
.6 Cementitious and Epoxy Patching Materials: BASF MasterEmaco repair mortar and epoxies.
2.2.3 Polyurethane Flooring 2 – for Service spaces above grade (Refer to Drawings for locations):
.1 Basecoat: Tremco Vulkem 360NF (waterproof membrane), complete with 150mm upturn.
.2 Topcoat: Tremco Vulkem 950NF, complete with 150mm upturn.
.3 Aggregate: as recommended by manufacturer to provide skid resistance.
2.2.4 Concrete Sealer (Refer to Drawings for locations):
.1 Vocomp-20 with Sure-Step Anti-Slip Additive.
2.2.5 Primers, thinners, fillers, patching kits, cleaning agents and equipment as per respective manufacturer's recommendations.

- 2.2.6 Provide samples. Provide three colours for each flooring type.
- 2.2.7 Epoxy Flooring 2 (Refer to Drawings for locations):
 - .1 Duromar HydroFlor zero VAC, breathable epoxy floor coating.
 - .1 Primer: Duromar HydroFlor Sealer-GC.
 - .2 Basecoat: Duromar HydroFlor, Breathable Floor Coating System.
 - .3 Aggregate: Silica Sand, 30-50 mesh size, to refusal.
 - .4 Topcoat: Duromar HydroFlor Top Coat, clear, maximum thickness is 3 mils.
 - .5 Coving material: as recommended by Duromar.
 - .6 Sealant: as recommended by Duromar.
 - .2 Troweled epoxy coves at all walls and concrete pedestals.
 - .3 Primers, thinners, fillers, patching kits, cleaning agents and equipment as per manufacturer.

3 **EXECUTION**

3.1 **Examination**

- 3.1.1 Surfaces to be coated shall be sound, clean, non-dusting, cured, free from oil and efflorescence or any other contaminants.
- 3.1.2 Report to the Contractor in writing all defects and unsatisfactory conditions. Commencement of Work shall imply the acceptance of the existing conditions.
- 3.1.3 Moisture content should not be excess of three percent and the surface temperature shall be a minimum of 15 degrees Celsius (59°F).
- 3.1.4 Concrete must be cured for a minimum of 28 days.

3.2 **Preparation**

- 3.2.1 Remove all previously applied flooring materials including adhesives.
- 3.2.2 Grind and scarify top surface of concrete to remove all flaking, and all concrete containing previously applied materials.
- 3.2.3 Apply self-levelling filler on all prepared substrates.
- 3.2.4 Mechanical abrasion of the concrete surface is required to remove any loose, poorly bonded finishes and also create surface profile for a mechanical bond. This will require the use of shot-blast machinery, sand blasting, scarifiers or diamond grinders.
- 3.2.5 Previously coated concrete and other surfaces: consult manufacturer for appropriate surface preparation.

3.3 **Application**

3.3.1 Cove Base:

- .1 Prepare and mix materials and apply each component of coating system in accordance with manufacturer's directions to produce a uniform monolithic surface. Total thickness to be 6mm uninterrupted.
- .2 Prime Coat: Apply 100% solids epoxy prime coat over prepared substrate at a spread rate of 8 mils. Allow to cure.

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- .3 Zinc Cove Strip: Attach at 100mm height to every vertical surface.
 - .4 Trowel Layer: Apply 100% solids epoxy prime coat over prepared substrate as per manufacturer's directions, to a finished thickness of 6mm. Trowel to form cove base using cove trowel.
 - .5 Grout Coat: Apply grout coat at thickness of 6 mils as per manufacturer's directions.
 - .6 Finish with coat clear, with patterns as indicated on Drawings.
- 3.3.2 Epoxy Flooring:
- .1 Prepare and mix materials and apply each component of coating system in accordance with manufacturer's directions to produce a uniform monolithic surface. Minimum of two coats required. Total dry film thickness to be 16 mils.
 - .2 Ensure any joints in flooring are sealed and covered. Ensure that the epoxy finishes to a clean edge at door openings. Protect exterior paving.
 - .3 Prime Coat: Apply 100% solids epoxy prime coat over prepared substrate and cove base at a spread rate of six (6) mils. Allow coating to cure.
- 3.3.3 Finish Coat: Apply 100% solids epoxy finish coat over the primed substrate and cove base at a spread rate of 10 mils. Allow coating to cure.
- 3.3.4 Anti-skid Top Coat: Apply 100% solids epoxy topcoat over entire floor at a spread rate of 6 mils "medium texture". Broadcast a very small amount of #32 silica aggregate into the wet coating and back roll. Allow coating to cure.
- 3.3.5 Finished colour and texture to meet approval of consultant. Patterns as shown on Drawings.
- 3.3.6 Allow final coat to cure before exposing to normal traffic. Consult manufacturer for curing times at different temperatures.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Instructions**
- 1.1.1 Comply with the requirements of all Sections. Work is to be in accordance with Contract Documents and Contract Drawings.
- 1.1.2 Report in writing to the Contractor any defects of surfaces or Work prepared by other trades which affect the quality or dimensions of this Sub-contractor's Work. Commencement of this Sub-contractor's Work shall imply complete acceptance of all Work by other trades.
- 1.2 **Section Includes**
- 1.2.1 Complete painting of all surfaces noted on Drawings and in Room Finish Schedule.
- 1.2.2 Finishing of new closet doors in Resident Rooms.
- 1.2.3 Mechanical and electrical conduit, piping and ductwork including hangers in exposed locations.
- 1.3 **Related Sections**
- 1.3.1 Section 08 10 00, Hollow Metal Doors.
- 1.3.2 Section 08 14 00, Wood Doors.
- 1.3.3 Section 09 29 00, Gypsum Board.
- 1.4 **Quality Assurance**
- 1.4.1 Employ fully trained workers who are regularly employed in this field.
- 1.4.2 Arrange for testing of paint/coatings by product manufacturer. Obtain in writing from manufacturer representative, approval of surface preparation methods, and obtain reports that materials and application methods conform to specification.
- 1.4.3 Comply with VOC limits set out by Green Seal Organization for all non-alkyd and non-epoxy coatings/paints.
- 1.5 **Referenced Standards**
- 1.5.1 Green Seal Certified Products:
- | | |
|-------------------|---------------------------------|
| CAN CGSB 1.100-99 | Interior Flat Paint Latex |
| CAN CGSB 1.119.95 | Interior Latex Primer-Sealer |
| CAN CGSB 1.195-99 | Interior Latex Semi-gloss Paint |
| CAN CGSB 1.209.93 | Low Sheen Latex Interior Paint |
- 1.5.2 ECP Environmental Choice Program:
- | | |
|-----------|-----------------------------------|
| ECP 07.89 | Water-borne Surface Coatings |
| ECP 02.89 | Solvent-borne Paints |
| MPI | Master Painters Institute Manual |
| SSPC | Steel Structures Painting Council |
- 1.6 **Samples**
- 1.6.1 Submit brush-outs 152.4mm x 152.4mm (6" x 6") of each paint application, labelled as to product and location. Proceed with

painting and staining mock-up only when colour and finish has been approved.

1.7 **Rejections**

- 1.7.1 Defective materials or quality of Work, whenever found, at any time prior to acceptance of the Work, shall be rejected regardless of previous inspection. Inspection will not relieve responsibility, but is a precaution against oversight or errors.
- 1.7.2 Remove and replace defective materials and Work of other trades affected by this replacement, at no additional cost to the Agency.

1.8 **Examination**

- 1.8.1 Report to the Consultant, in writing, all defects of surfaces or Work prepared by other trades and on unsatisfactory site conditions.
- 1.8.2 Thoroughly examine all surfaces scheduled to receive paint to see that they are dry, clean, free from cracks, scaling, grease, oil, or other foreign materials liable to impair adhesion, performance or appearance. Take moisture readings.
- 1.8.3 Commencement of Work implies total acceptance of all surface conditions.

1.9 **Material, Storage and Handling**

- 1.9.1 Bring materials to the site in the original unopened containers labelled to indicate the name of the manufacturer, brand, colour and quality of the contents.
- 1.9.2 Store thinners, loose soaked rags and similar combustible materials in closed containers. Remove from site or store in an assigned area.
- 1.9.3 Store paint materials at temperatures recommended by manufacturer.

1.10 **Job Conditions**

- 1.10.1 Co-operate in coordinating the Work of other Sections with the Work of this Section, so that the Work may proceed in an orderly and effective manner.
- 1.10.2 If requested, provide proof of purchase of all paint materials needed for the job.
- 1.10.3 Maintain minimum interior temperature of 18 degrees Celsius during application and drying of paint, and maintain until handover to Agency.
- 1.10.4 Do not paint when ambient air and surface temperatures are less than 15 degrees Celsius for 24 hours before or during painting application.

1.11 **Scheduling**

- 1.11.1 Unoccupied Areas: Cooperate with other trades to minimize touch-ups, but to ensure completion prior to installation of floor coverings and furniture.

1.11.2 Occupied Areas: Schedule painting to prevent disruption to occupants. Painting shall be carried out as arranged with Agency.

1.11.3 All finishing work must be done in staging area. No painting is permitted within the Resident Rooms.

1.12 **Clean-up**

1.12.1 Upon completion of the Work of this Section, remove from the site all surplus material and debris caused by the Work of this trade to the satisfaction of the Consultant.

1.12.2 Extra Paint: Leave one litre of each finish material in each colour used on the jobsite, properly labelled.

1.13 **Guarantee**

1.13.1 Provide a written guarantee of Work of this Section against defects in material and quality of Work for a period of one year from the date of publication of the Certificate of Substantial Performance.

2 **PRODUCTS**

2.1 **General**

2.1.1 Provide new materials in perfect condition, free from defects impairing physical performance and appearance.

2.1.2 No claim as to unsuitability or unavailability of any material specified, or unwillingness to use same, or inability to produce first class work with same will be entertained unless such claims are made in writing and submitted with proposal.

2.1.3 Select materials for application on each type surface from a single manufacturer.

2.2 **Hollow Metal Doors Backpainting**

2.2.1 Tremco "Instant Patch".

2.3 **Finish and Colours**

2.3.1 The Consultant will issue a schedule of the colours of paint and other finishes as required by job progress.

2.3.2 Gloss/Sheen Ratings:

.1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with following Master Painters Institute (MPI) values:

<u>Gloss Level</u>	<u>Description</u>
G1	Matte or flat finish
G2	Velvet finish
G3	Eggshell finish
G4	Satin finish
G5	Semi-gloss finish
G6	Gloss finish
G7	High-gloss finish

.2 Gloss level ratings of all painted surfaces shall be as specified herein and as noted on finish schedule.

- 2.3.3 All closet doors to be semi-gloss clear urethane finish.
- 2.3.4 The submitted brushouts and approved mock-up shall be the only determining factors in assessing approved colour tone and shade.
- 2.3.5 Interior colours will be based on two base colours and three accent colours with a maximum of two deep or bright colours. No more than three colours will be selected in each area. Note that this does not include pre-finished items by others, e.g. aluminum or vinyl windows, aluminum doors and handrails, etc.
- 2.3.6 Unless otherwise noted or scheduled, wall shall be painted the same colour within a given area.

2.4 **Gloss Levels**

- 2.4.1 Except as described below or indicated on the finish schedule, interior walls and ceiling surfaces shall be painted in accordance with the following criteria over appropriate prime / sealer coat:
 - .1 Washrooms and Kitchen - washable latex with G5 (semi-gloss) finish.
 - .2 Doors, frames and trim shall be refinished in transparent stain and polyurethane varnish.
- 2.4.2 Access doors, prime coated butts and other prime painted hardware (e.g. door closers), registers, radiators and covers, exposed piping and electrical panels shall be painted to match adjacent surfaces (i.e. same colour, texture and sheen), unless otherwise noted or where pre-finished.

2.5 **Mixing and Tinting**

- 2.5.1 Deliver paints and enamels ready mixed to jobsite. Job mix and tint only when approved by the Consultant.
- 2.5.2 Tint undercoats and each finish coat progressively to enable confirmation of number of coats.

2.6 **Paint and Stain Applications for Various Uses**

- 2.6.1 New Drywall:
 - .1 One coat latex primer.
 - .2 Two coats finish G3 / G4.
- 2.6.2 Existing Drywall:
 - .1 One coat primer.
 - .2 One coat finish G4 or G5.
- 2.6.3 Clear finish Birch veneer doors:
 - .1 One coat wood sealer – clear.
 - .2 Two coats clear urethane G5.
 - .3 Prefinished doors are acceptable, if available; otherwise doors must be painted off-site, prior to doors being brought to residents' rooms. Stain colour to match existing.
- 2.6.4 Hollow metal door and frame:
 - .1 One coat latex primer.
 - .2 Two coats finish G3/G4.

3 **EXECUTION**

3.1 **Verification of Surface Conditions**

- 3.1.1 Start Work only when surfaces and conditions are satisfactory for production of quality Work. Report to Consultant in writing any surfaces which are found to be unsatisfactory. Commencement of Work shall imply acceptance of substrate surfaces.
- 3.1.2 Ensure temperature of surfaces to be finished between ten degrees Celsius and twenty degrees Celsius (50°F and 68°F) and surfaces are dry and free of dirt, grease or other contaminants that may affect applied finish.
- 3.1.3 Verify moisture content of surfaces with electronic moisture metre. Do not proceed without written directions if moisture reading is higher than 12-15 percent.
- 3.1.4 If substrate is steel, do not apply coatings over moisture or when surface temperature is within three degrees Celsius (5°F) of dew point.
- 3.1.5 If substrate is masonry, allow to cure for 30 to 90 days. Ensure that moisture content is below 12 percent and test for alkalinity and neutralize (pH 6.5-7.5) before proceeding with priming.
- 3.1.6 If substrate is gypsum board, inspect to ensure joints are completely filled and sanded smooth. Inspect surfaces for "nail popping", screw heads not recessed and taped, breaks in surface or other imperfections and have repaired as required.
- 3.1.7 If substrate is wood, do not stain or paint if moisture reading is higher than 12%. Inspect work to assure surfaces are smooth, free from machine marks and nail heads have been countersunk.

3.2 **Protection**

- 3.2.1 Remove finish hardware, electrical switch and outlet covers, receptacle plates, fittings and fastenings, to protect from paint splatter. Mask items not removable. Use sufficient drop cloths and protective coverings for full protection of floors, furnishings, mechanical, electrical and special equipment, all other components of building which do not require painting or to be removed, from paint spotting and other soiling. Re-install items when paint is dry. Clean any components that are paint spotted or soiled.
- 3.2.2 Keep waste rags in covered metal drums containing water and remove from building at end of each day.
- 3.2.3 Prohibit traffic, where possible, from areas where painting is being carried out and until paint is cured. Post "wet paint" or other warning signage during and on completion of Work.
- 3.2.4 When handling solvent coating materials, wear approved vapour/particulate respirator as protection from vapours. Dust respirators do not provide protection from vapours.

3.3 **Surface Preparation**

- 3.3.1 Remove dust, grease, rust and extraneous matter from surfaces (except rust occurring on items specified to be primed under other

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- Sections shall be removed and Work re-primed under those Sections). Vacuum (fibre acoustic tile and) insulation covering surfaces. Vacuum clean floors before painting; wipe clean adjacent surfaces and surfaces to be painted before Work is commenced to prevent dust and debris damage to wet paint.
- 3.3.2 Remove mildew by scrubbing affected area with solution of tri-sodium-phosphate (TSP) (150g) and bleach (125g) in 3.5L water. Rinse well with clean water and allow to dry. If condition is serious, source out finishes with extra mildew resistance.
- 3.3.3 Previously Finished Surfaces:
- .1 Clean existing interior and exterior surfaces to be repainted or varnished to provide bond. Remove rust, scale, oil, grease, mildew, chemical and other foreign matter. Remove loose paint and fill flush with suitable patching material. Clean off bubbled, cracked, peeling or otherwise defective paint by stripping with suitable environmental strippers or by burning. Do not burn off paints suspected of having lead content. Treat residue from stripping as hazardous waste. Flatten gloss paint and varnish with sandpaper and wipe off dust. If previous coating have failed so as to affect proper performance or appearance of coatings to be applied, remove previous coatings completely and prepare substrates properly and refinish as specified for new work. Leave entire surface suitable to receive designated finishes and in accordance with finish manufacturer's instructions.
- 3.3.4 Gypsum Board:
- .1 Examine surfaces after for imperfections showing through and fill small nicks or holes with patching compound and sand smooth. Examine surfaces after priming for imperfections showing through. Clean surfaces dry, free of dust, dirt, powdery residue, grease, oil, wax or any other contaminants. Sand and dust as necessary prior to painting.
- 3.4 During Work of this Section cover finished floors, walls, ceilings, and other Work in vicinity and protect from paint and damage.
- 3.5 Clean adjacent surfaces which have been painted, soiled or otherwise marred.
- 3.6 **Application**
- 3.6.1 Spraying not allowed without written permission.
- 3.6.2 Paint entire plane of areas exhibiting incomplete or unsatisfactory coverage and of areas which have been cut and patched. Patching not acceptable.
- 3.6.3 Do not paint baked enamel, chrome plated, stainless steel, aluminum or other surfaces finished with final finish in factory. Finish paint all primed surfaces.
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- 3.6.4 Advise Consultant when each applied paint coat can be inspected. Do not re-coat without inspection. Tint each coat slightly to differentiate between applied coats.
 - 3.6.5 Sand smooth enamel and varnish undercoats prior to re-coating.
 - 3.6.6 Apply primer coat soon after surface preparation is completed to prevent contamination of substrate.
 - 3.6.7 Apply primer-sealer coats by brush or roller. Permit to dry in accordance with manufacturer's recommendations before applying succeeding coats. Touch-up suction spots and sand between coats with No. 120 sandpaper.
 - 3.6.8 Apply primer coat to unprimed ferrous metal surfaces.
 - 3.6.9 Apply final coats on smooth surfaces by roller or brush. Hand brush wood trim surfaces.
 - 3.6.10 Apply additional paint coats, beyond the number of coats specified for any surface, to completely cover and hide the substrate and to produce a solid, uniform appearance.
 - 3.6.11 Allow each coat of paint to cure and become dry and hard before application of succeeding coats (unless manufacturer's directions require otherwise).
 - 3.6.12 Before finishing paint coats are applied, inspect and touch-up shop coats of primers previously applied by other trades or fabricators.
 - 3.6.13 Apply paint in accordance with manufacturer's directions.
 - 3.6.14 Provide paint coating thicknesses indicated, measured as minimum dry film thicknesses.

3.7 **Existing Spaces**

- 3.7.1 Refinish existing surfaces of rooms or areas which have been damaged, altered or otherwise specified. Use same procedure as for new Work but primer (or filler, stain and sealer in case of varnish finish) may be omitted. Prepare existing surfaces as specified herein. Finish shall match previous finish.
- 3.7.2 Paint or repaint rooms or areas where noted on room finish schedule and/or as indicated on Drawings.
- 3.7.3 Repaint surfaces entirely between changes of plane.
- 3.7.4 Extend painting to a suitable boundary to avoid a "patched" effect. Sand, wire brush, or scrape such existing finished surfaces to remove loose paint and to reduce gloss. Also clean existing films of dirt, grease or wax. If metallic surfaces are rusted, remove loose scale to provide a firm surface. Patch and sand cracks and other imperfections.
- 3.7.5 Provide paint to interior existing spaces effected by alterations and shelled-in spaces in accordance with following:
 - .1 Paint walls to the nearest inside and outside corners for the full wall height.
 - .2 Paint full ceilings to the nearest wall or bulkhead.
 - .3 Unless indicated otherwise match the existing colour.
 - .4 Where room finish schedule indicates existing and /or new wall finishes to be painted, existing surfaces such as, existing

door and frames, mechanical supply and return air grilles (both on walls and ceilings), access doors and electrical panels which has been previously painted shall be painted for a complete finish room. If the room finish schedule indicates “-“ it denotes the entire room need not be painted, only the patched areas to be painted.

- 3.7.6 Apply at least the number of coats specified to produce a finish of even colour, texture and sheen.
- 3.7.7 Lightly sand all finishes between coats and clean. Finish tops, bottoms and edges of doors, after doors are fitted.
- 3.7.8 Fill screw heads, holes and other defects in metal work with mineral filler. Putty nail holes, cracks and other defects in Work, other than metal to match finish intended.
- 3.7.9 Spray work is not permitted, unless done off-site.

3.8 **Re-touching**

- 3.8.1 Make a close inspection of all surfaces decorated, after completing this Work, and ensure that they are properly and perfectly re-touched where damaged before removing equipment.

3.9 **Clean-up**

- 3.9.1 Do not wash brushes, rollers, clothes, etc. in running water; fill two suitably sized containers with clean water. Use first clean and second clean process for all paint. Final rinse only may be in running water.
- 3.9.2 Keep closed container of paint thinners on hand for ongoing cleaning. Do not dispose of paint thinners to sewer; take off site at end of each day and take to hazardous waste disposal depot.
- 3.9.3 Collect all emulsion from cleaning into containers and recycle or dispose at hazardous waste disposal depot, in accordance with local, provincial and federal environmental regulations.
- 3.9.4 Provide proof of proper disposal by receipt from hazardous waste disposal depot.

4 **PAINT COLOUR SCHEDULE**

- 4.1 A colour schedule of architectural finishes will follow.

END OF SECTION

1 **GENERAL**

1.1 **Related Documents**

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.

1.1.2 Work included under this section is to be included in the base bid Price by the Contractor

1.1.3 The Contractor shall be responsible for coordinating all work contained in this section of the specification including the work provided by the:

1. Foodservice Section 11 40 00;
2. Electrical Division 26;
3. Plumbing Division 22;
4. Mechanical Division 23;
5. Architectural Millwork Division 06; and
6. Other trades subcontractors.

1.1.4 **ABBREVIATIONS**

S.S.	-	Stainless Steel
C/W	-	Complete With
A.F.F.	-	Above Finished Floor
A	-	Amperes
V	-	Volts
CY	-	Cycle
P	-	Phase
Pl. lam.	-	Plastic Laminate
Kw	-	Kilowatt
kPa	-	Kilopascals
J.B.	-	Junction Box
CFM	-	Cubic Feet per Minute
L.E.D	-	Light Emitting Diode
in	-	Inches
ft	-	feet
F	-	Fahrenheit
C.P.	-	Chrome Plated
I.P.S.	-	Inside Pipe Size
N.I.C.	-	Not in Contract (for Section 114000)
L.C.	-	Load Center
CBP	-	Circuit Breaker Panel
KEC	-	Kitchen Equipment Contractor

1.1.5 Delivery and installation, removal, storage and relocation of all food service equipment, included in this specification to be as per the schedule set out by the Contractor or other designated party.

1.2 **Related Typical Work By Other Trades**

1.2.1 Work Provided By Electrical Division 26

- .1 Supply, installation of all necessary electrical wiring in liquid tight flexible conduit required for the final connection and operation of, foodservice equipment.

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- .2 Supply and installation of electrical wiring from the building source or distribution point of power, through disconnect switches to the terminals, connection box, circuit-breaker panel on the equipment. Equipment manufacturer's control panels and switches are not considered to be disconnect switches unless specifically permitted by applicable codes.
 - .3 Supply, installation and co-ordination of all required disconnect switches.
 - .4 Supply and installation of receptacles in all food service areas. All receptacles in wet areas such as the dish-room and pot wash areas must be waterproof and must have ground fault interrupters.
 - .5 Supply and install the reset relay or shunt trip to shut down electricity to the cooking equipment in the event of activation of the surface fire suppression system.
 - .6 Supply, rough-in and installation of all electrical wiring required for "Agency's Supplied", "Existing", "Relocated" or "NIC" designated equipment, as well as final hook-up and connections.
 - .7 Supply and installation of all ceiling hung twist lock type receptacles as required.
 - .8 Disconnect and remove existing services for equipment that is removed from the kitchen.
 - .9 Disconnection and later reconnection of any equipment designated as "Existing Equipment to Be Relocated or Reused".
- 1.2.2 Work Provided By Plumbing – Division 22
- .1 Supply, installation, rough-in and connection of all domestic hot and cold water, drains, vents, gas supply lines, as per code from building supply to the point of connection required for the complete operation of, the foodservice equipment.
 - .2 Supply and installation of domestic hot and cold water lines complete with shut off valves, back flow preventers, line strainers, shock absorbers, pressure, temperature and pressure gauges and control valves or devices (unless otherwise stated and/or supplied with the equipment of this section). This project will be constructed, using components (valving and piping) which satisfies the requirements for a "Lead Free" domestic water supply system as defined by the local codes. All valves, piping, and fittings 52mm and smaller, used in domestic water piping serving faucets or plumbing fixtures used to dispense water for drinking or food preparation shall conform to the local code requirements.
 - .3 Supply and installation of drain lines complete with traps, vent piping and clean outs.
 - .4 Supply and installation of drain lines, traps, vent piping, clean outs and grease traps, drains for floor pans, connected drains for equipment, floor drains with funnels for open drains on equipment and exhaust ventilators.
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- .5 Extend all open or connected drains on foodservice equipment to above funnel floor drains using chrome plated piping.
 - .6 Supply and installation of gas lines with manifolds to each piece of gas fired foodservice equipment complete with shut off valves. Installation of mechanical gas valve(s) as specified under the Foodservice Section of Section 11 40 00, in conjunction with the fire suppression system. Install pressure regulating valves as specified under the Foodservice section of Section 11 40 00.
 - .7 Connection of all equipment designated as "Agency Supplied".
 - .8 Disconnection and later reconnection of any equipment designated as "Existing Equipment to Be Relocated or Reused".
 - .9 Capping off of all mechanical services for all equipment designated to be removed.
- 1.2.3 **Work Provided By Other Trades**
- .1 Finished floors to slope to all floor drains to ensure proper drainage and prevent pooling.
 - .2 Supply and installation of grout under and around floor sump pans and depressions.
- 1.3 **Work Included By Foodservice Section 11 40 00 Contractor**
- 1.3.1 **General:**
- .1 The work listed here includes, but is not limited to, the provision of all equipment indicated on the Drawings and listed in the specifications together with labour, material, tools, plant, delivery, un-crating, setting-in-place of equipment, final assembly of equipment items shipped knocked down or in sections and cleaning herein ready for final connection of services by mechanical and electrical trades.
 - .2 The work listed here includes coordination of the schedule for the manufacture, delivery and setting into place of the food service equipment in conjunction with the overall construction schedule being maintained by the Contractor. This also includes the delivery and set-into-place of all large foodservice equipment that may not fit through normal building doorways. Ensure that there is sufficient access into the building for the delivery and set into place of all foodservice equipment.
 - .3 Attend project site meetings when requested by the Contractor, food service consultant, Agency and/or Consultant and provide coordination with the other construction team members as required.
 - .4 Oversee the scheduling, performance and delivery of all work and products being supplied by sub-contractors hired by the KEC.

- .5 Provide all required Drawings including by not limited to: plans, elevations, construction and fabrication details, mechanical and electrical rough in and connection Drawings in conjunction with the project schedule as maintained by the Contractor. Note the KEC is to show services for Agency supplied Agency installed equipment on their Shop Drawings.
 - .6 KEC is to remove all equipment denoted as existing to be reused or relocated and provide cleaning and storage of the equipment.
- 1.3.2 Exhaust Ventilators, (Hoods) And Fire Suppression Systems
- .1 Supply/retrofit existing fire suppression piping, bottles, fusible links as specified, release mechanisms and all other necessary accessories and components to form a complete operational and approved system.
 - .2 The supply and installation of remote fire suppression system shall be in accordance with all requirements and regulations of "N.F.P.A. Code 96", Local Building Code and other local municipal authority having jurisdiction.
- 1.3.3 Existing Equipment And Phasing
- .1 The Foodservice Equipment Sub-contractor shall be responsible to inspect, remove, clean, refurbish and relocate any existing equipment being reused to the intent specified. If the unit cannot be rendered operational within the parameters specified, the Foodservice Equipment Sub-contractor shall notify the consultant prior to refurbishing.
 - .2 The Foodservice Equipment Sub-contractor shall be responsible at the time of bidding to review all existing equipment specified to be re-used and to determine if this equipment is suitable for relocation, re-connection and on-going use. If in the opinion of the Foodservice Equipment Sub-contractor, the equipment is not suitable for re-use, the sub-contractor shall either include a price for new equipment in the base bid or include the cost for re-furbishing. No extra will be allowed during construction for refurbishing of existing equipment.
 - .3 The Foodservice Equipment Sub-contractor shall be responsible to coordinate the set-into-place and installation of all foodservice equipment being supplied by the Agency. This shall include incorporating all relevant mechanical and electrical service requirements in the Shop Drawings.
 - .4 Existing equipment in the current kitchen that is not required as part of the new kitchen will be removed by the Foodservice Equipment Sub-contractor to a location within the building as designated by the Agency.
- 1.4 **Miscellaneous**
- 1.4.1 Supply and installation of all hardware and standard accessories normally part of the equipment whether shown and/or specified or not; ie locks, catches, handles, hinges, etc.

- 1.4.2 Provision of rubber button feet or pads under any piece of equipment that will rest on a counter.
 - 1.4.3 Caulking and sealing of equipment to walls, curbs, bases, adjacent units and between any dissimilar materials. Use an approved silicone sealer for gaps under 0.33" and stainless steel trim strips and sealer for wider gaps. Prepare area being siliconed prior to silicone application.
 - 1.4.4 Securing of all permanent equipment to floor or base. Use stainless steel shims for levelling.
 - 1.4.5 Supply and installation of all stainless steel strips and filler pieces necessary to properly finish any individual or combined set of pieces of equipment as part of the Contract.
 - 1.4.6 Protection, identification and recessing of all controls, pilot lights, switches and valves on any item of equipment.
 - 1.4.7 Supply of all standard equipment accessories normally furnished with all items specified whether indicated or not.
 - 1.4.8 Provision of all inserts, bolts, anchors, sleeves, ferrules, sleepers and other assorted hardware as may be necessary for the proper anchorage, fixing or attachment of equipment to the building.
 - 1.4.9 Verification of the dimensions and services of all pieces of equipment that may be supplied by the Agency but are to become a part of a unit specified under this work in order to ensure a proper fit and co-ordination of installation.
- 1.5 **Quality Assurance**
- 1.5.1 The work of this section shall be executed by qualified Foodservice Equipment Sub-Contractors such as foodservice equipment dealer/custom stainless steel fabricator.
 - 1.5.2 If the Foodservice Equipment Sub-Contractor performing the work included in this specification is an equipment dealer only, the firm shall at the time of proposing, provide in writing the name, address and qualifications of the fabricator proposed for the manufacturing and installation of custom stainless steel equipment
 - 1.5.3 If the Foodservice Equipment Sub-Contractor performing the work included in this specification intends to further sub contract out any portions of the work they are to perform to another individual or firm including but not limited to research and development, design, sub-fabrication, stamping, sub-assembly, electrical wiring or controls and any parts or all of the installation, the name of the proposed individual or firm who the Foodservice Sub-contractor intends to further sub-contract work to, must be identified at the time of proposal. No further subcontracting will be permitted after proposal award without written authorization by the food service consultant.
 - 1.5.4 Before submitting proposals, it is the responsibility of the bidder to carefully examine the Drawings, specifications and the site to become aware of all existing conditions and limitations and to ensure that all of the work called for will be included in the proposal submission.

1.5.5 All equipment and components supplied from manufacturers shall be the latest model or issue and shall be new and unused in every respect.

1.6 **Certificates Of Approval**

1.6.1 All work and materials shall be in accordance with the latest rules and/or regulations of agencies/ authorities having jurisdiction. All regulations, including building codes, and other codes applying to this jurisdiction should be followed. In addition all equipment shall comply with the following:

- .1 National Electric Manufacturer's Association, (N.E.M.A.).
- .2 Underwriter's Laboratories Inc. (U.L.), must bear label.
- .3 National Electric code, (N.E.C.).
- .4 National Sanitation Foundation, (N.S.F.), must bear label.
- .5 American Society of Mechanical Engineers must carry the (A.S.M.E.) stamp.
- .6 American Gas Association (A.G.A.).
- .7 State and Local Health Department Requirements.
- .8 American with Disabilities Act (ADA) as applicable to this project.

1.6.2 The Contract Documents shall govern whenever they require larger sizes or higher standards than are required by regulations.

1.6.3 The regulations shall govern whenever the Contract Documents require something which will violate the regulations.

1.6.4 No extra charge will be paid for furnishing items required by the regulations, but not specified and/or shown on the Drawings.

1.6.5 Rulings and interpretations of the enforcing agencies shall be considered a part of the regulations.

1.6.6 The KEC is responsible to maintain the accuracy of equipment Drawings and cut books to reflect as built conditions due to equipment deletions, manufacturer and/or model number changes and unanticipated changes to site conditions. It will be the KEC's sole responsibility to notify the Health Department having jurisdiction of all revisions until the project is issued its Certificate of Occupancy.

1.6.7 Conform to all laws, bylaws, rules, regulations and requirements of all authorities having jurisdiction.

1.6.8 All electrical equipment must conform to the National Electrical Code, the Electrical Inspection Department Bulletins, the National Electric Code. All equipment must have an approval label. Equipment that is not N.E.M.A. approved will be rejected, removed from the site and substituted for at no additional cost to the Contract.

1.6.9 Gas equipment shall conform to the A.G.A.

1.6.10 Any plumbing or drainage systems shall conform to the Local Plumbing Code.

1.6.11 Each piece of equipment shall be accompanied by a label or certificate of approval.

- 1.6.12 All mechanical refrigeration system shall be supplied with safety relief valves, shut-off valves for each piece of equipment and all other items as required by local regulations.
- 1.6.13 All welded pressure vessels shall be constructed to ASME Code. The vessels shall bear the stamp and certificates framed under glass and hung adjacent to the vessel.
- 1.6.14 Equipment design and fabrication must conform with the National Sanitation Foundation and Provincial as well as Local Municipal Health Department Regulations.
- 1.7 **Permits**
- 1.7.1 The Contractor shall obtain and pay for all necessary permits, inspections and certificates and licenses required and necessary for the performance of the work and post all notices required by law and comply with all laws, ordinances and regulations bearing on conduct of the work as drawn and specified.
- 1.8 **Shop Drawings And Plumbing, Mechanical And Electrical Requirements**
- 1.8.1 All fabricated items and assemblies of equipment shall be completely illustrated by Shop Drawings with detailed descriptions, clearly indicated methods of construction, gauges, assembly, fastenings and services, etc.
- 1.8.2 Ensure that all component parts and assemblies of each piece of equipment will support the loads anticipated without detriment to function, safety or appearance.
- 1.8.3 Prepare Shop Drawings on the same size sheet as plans and elevations, in a scale of not less than 1:50 for plans and 1:25 for details and sections so as to clearly illustrate the construction and arrangement of equipment.
- 1.8.4 Prepare fully dimensioned "roughing-in" and final connection point Drawings for mechanical and electrical services. Separate mechanical and electrical, or combined Drawings, may be submitted. In either case, Drawings must be a minimum of 1:50. Include walk-in and fire suppression schematics and any pertinent installation diagrams including dimensioned "sleeving" Drawing.
- 1.8.5 "Rough-in" and "final connection point Drawings" must include a list of symbols for each type of connection and must show the location of connections on equipment as well as the location of the rough-in point for all mechanical and electrical services. Both connections to the equipment and the rough-in point must be dimensioned so as to show the relative distances from grid lines or architectural wall reference points as well as the height above the finished floor.
- 1.8.6 Verify the energy requirements for any piece of equipment that is being supplied by the Agency or is existing and being reused. Incorporate this information into the Shop Drawings, "rough-in" and connection point Drawings.
- 1.8.7 Base, curb and depression Drawings including low walls, cut-outs and openings must be fully dimensioned and drawn at 1:50 scale.
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- 1.8.8 Submit equipment data sheets and Shop Drawings in the following order:
- .1 Catalogue cuts and illustrations.
 - .2 Plan lay out Drawing with mechanical and electrical "roughing-ins"
 - .3 and "connection points"
 - .4 "Sleeving" Drawing
 - .5 Base, curb and depressions
 - .6 Custom fabricated items
- 1.8.9 All Shop Drawing submissions shall be checked and signed by a senior member of the firm qualified to evaluate the function and construction necessary.
- 1.8.10 Prior to manufacture, the Foodservice Equipment Sub-Contractor shall provide a schedule outlining the proposed manufacture and installation dates for all equipment.
- 1.8.11 Submit Shop Drawings in accordance with Division 01 requirements.
- 1.8.12 "Rough-in" and connection point Drawings will not be reviewed unless the catalogue cuts and illustrations are submitted first.
- 1.9 **Catalogue Cuts And Illustrations**
- 1.9.1 All manufactured items being purchased by the Foodservice Equipment Sub-Contractor must be illustrated by catalogue cuts and data sheets.
- 1.9.2 Submit two (2) sets of illustration/cuts bound in booklet form for review. Sheets are to be in numerical order, properly labelled with the name of the project and accompanied by a lead sheet with an itemized list of contents. The lead sheet must include the project name, the name of the Contractor, the name of the KEC, the item number, the manufacturer's name and model number, all options and accessories included as well as mechanical and electrical service requirements (see typical example provided).

BROCHURE LEAD SHEET (typical information required)	
ITEM NO: _____	QUANTITY: _____
DESCRIPTION: _____	
MANUFACTURER: _____	
MODEL NUMBER: _____	
SERVICES;	
ELECTRIC: _____ VOLTS, _____ PHASE, _____ WATTS, _____ KW _____ AMPS	
NEMA PLUG CONFIGURATION: _____	
PLUMBING: _____ NPT (HW) _____ NPT (CW) _____ I.W., _____ WASTE	
STEAM: _____ (INLET) _____ (CR), _____ PSI	
GAS: _____ BTU, (NATURAL) (LP)	
ACCESSORIES, ATTACHMENTS OR REMARKS:	
1. _____	
2. _____	
3. _____	
4. _____	

- 1.9.3 Ensure that the equipment suits the space allocations and the intent of the design.
- 1.9.4 After the illustrations have been reviewed, provide the required number of sets for distribution.

1.10 **Design Drawings And Site Dimensions**

- 1.10.1 In addition to preparing Shop Drawings illustrating custom fabricated equipment or assemblies, the Foodservice Equipment Sub-contractor shall be responsible to prepare a set of final plan layouts of the foodservice equipment included. These final plan layouts are to include:
- .1 1:50 final plan Drawings of the site, on AutoCad version 2014 or later
 - .2 Finalized itemized list of food equipment by component and functional area indicating item number, quantity, manufacturer, model number, etc. for all new and relocated existing equipment;
 - .3 Detailed schedule of the mechanical, electrical and structural requirements for new and re-used existing equipment with connection size information; and
 - .4 Depression and curb layout Drawings.

2 **PRODUCTS**

2.2 **Commercially Manufactured Equipment**

- 2.2.1 All items of standard equipment shall be the latest model at time of delivery.
- 2.2.2 Manufacturer's directions shall be followed in cases where the manufacturers of articles used in this Contract furnish directions or prints covering points not shown on the Drawings or specifications.
- 2.2.3 All doors shall be hinged as shown on plans.

2.3 **Foodservice Equipment Flexible Connectors**

- 2.3.1 The Contractor shall furnish the following cooking appliances with appropriately sized (length and diameter) flexible connectors, coiled restraining devices and installation hardware, as indicated below:
- 2.3.2 Gas Appliances (Mobile) Dormont Model BPQ-2SR Series flexible connector with two (2) Supr-Swivel couplings and one (1) coiled restraining device with installation mounting hardware.
- 2.3.3 Gas Appliances (Stationary) Dormont Model BPQ-2S Series Flexible Connector with two (2) Supr-Swivel couplings.
- 2.3.4 Length restraining device on mobile units to be sufficient to allow movement of equipment for housekeeping.
- 2.3.5 Flexible connectors to be NSF and AGA certified.
- 2.3.6 Division 23 shall connect all quick-disconnect hoses to equipment.

2.4 **Fire Suppression Systems**

- 2.4.1 Fire suppression systems will be installed to conform with all applicable codes.
- 2.4.2 All piping to surface protection nozzles to be chrome plated.
- 2.4.3 Minimize elbows on piping to surface protection nozzles.
- 2.4.4 Coordinate placement of protection nozzles to avoid conflict cooking equipment and accessories.
- 2.4.5 All piping drops to surface protection nozzles to be aligned in the same planes.

2.5 **Buy Out Equipment**

- 2.5.1 The following is a list of standards for all "buy out" equipment:
 - .1 The intent is that exposed metal surfaces of buy-out equipment units have a
 - .2 Stainless steel finish except where the model number of the unit dictates aluminum. For those items where stainless fronts, tops, rears and sides are "optional" we expect that a stainless finish will be provided in those areas where the finish is exposed.
 - .3 Provide any/all stacking/mounting kits as may be required per the manufacturers' recommendations for stacking equipment units together.

2.6 **Floor Troughs**

2.6.1 When specified, floor troughs are to be properly dimensioned on the KEC building works rough-in plan. Careful coordination is required so that trough grate removal is unobstructed by adjacent equipment units. Further, where troughs are specified in front of tilting units (braising pans, kettles), the equipment is to be placed so that the center of the pour path on the tilting unit aligns with the center line of the trough.

2.7 **Ventilation Work**

2.7.1 KEC to verify field conditions and provide and install matching trim and closure panels (as required) to close gaps between exhaust hoods, adjacent walls and ceilings. All trim and closure panels to be provided by ventilator manufacturer.

2.8 **Fire Suppression System**

2.8.1 The basic requirements for the design, installation and use of a pre-engineered fire suppression system shall be governed by the current edition of the NFPA-17a, NFPA-96, UL listed, and acceptable to the local authorities having jurisdiction.

2.8.2 The hood manufacturer shall supply a wet chemical fire suppression system as specified in the itemized specification. The fire protection system is to cover all the exhaust hoods as well as the duct common points.

2.8.3 The hood manufacture shall provide a pre-piped fire suppression system with full coverage in each hood, plenum and duct collar. Each fire suppression drop shall extend from the roof of the hood and shall be chrome plated or stainless steel pipe or sleeve. The complete coverage of each hood will allow appliance(s) to be relocated and/or removed and/or added to any hood without requiring any changes to the overall capacity of the Piranha system or re-location of the fire suppression drops. (Exception: Appliances requiring specific nozzle location per the UL listing. i.e. Salamander Broiler, Upright broilers)

2.8.4 The hood manufacturer shall provide detector(s) factory installed in each hood and wired to a common junction box on top of each hood. The detectors shall be accessible from the underside of the hood. The quantity and location of the detectors shall be in accordance with the UL listing and the authority having jurisdiction.

2.8.5 A fire condition shall cause the system to automatically discharge above the hazard areas and extinguish the fire.

2.8.6 On discharge of the system, all fuel and power to cooking equipment shall be shut off automatically by means of a mechanical or electrical (if so specified) gas valve for gas equipment and/or under voltage shunt trip for electrical equipment.

2.8.7 Gas valve(s) shall be supplied by the hood manufacturer for installation in the gas supply line by the Mechanical Division. The hood manufacturer shall supply a gas valve reset station in the fire suppression control panel in the event of a power failure or fire.

- 2.8.8 Shunt trips shall be supplied, installed and wired by the Electrical Division.
- 2.8.9 Provide mechanical or electrical, if so specified, remote fire pull stations at the kitchen exit(s).
- 2.8.10 System discharge nozzles shall have grease caps.
- 2.8.11 The hood manufacturer shall supply and install all field and factory piping in accordance with the UL listing of the fire suppression system. Conceal all piping above the roof of the hood whenever possible. All exposed piping to be stainless steel or chrome plated and/or sleeved.
- 2.8.12 The system shall be installed to the manufacturer's specifications, by qualified representatives and in strict accordance to all applicable codes.
- 2.8.13 Supply and installation of the field piping from the hoods shall be by the hood manufacturer in accordance with the UL listing. The hood manufacturer to supply all thermostatic detection devices, release mechanisms and other accessories and components to form a complete operational and approved system.
- 2.8.14 The hood manufacturer to supply and set-in-place for wiring by the Control Division the electric manual remote pull station for the fire suppression system(s) as required by the local authorities having jurisdiction.

2.9 Itemized Equipment Specifications

- 2.9.1 The following numbers correspond to those on the Foodservice Equipment Drawings.
- 2.9.2 Where a manufacturer's name and model number is indicated, the item shall be supplied with all standard components, features and materials whether specifically identified or not, and shall be considered inherent in this specification.
- 2.9.3 Items identified as custom fabricated shall be constructed of stainless steel unless otherwise specified. Refer to detail Drawings at the end of this section for general fabrication methods for all items.
- 2.9.4 Verify mechanical and electrical services on Agency supplied equipment.
- 2.9.5 Approved alternative manufactures must supply a product that is equal in performance to the specified item.
- 2.9.6 The following are preliminary lists of generic equipment required in the Main Kitchen.

ITEM NO. 1.0XX: EXISTING EQUIPMENT

Components:

- .1 KEC relocated all existing equipment that is denoted as "ITEM TO BE RELOCATED BY KEC" to their warehouse storage location and to clean all equipment prior to being relocated back to the main kitchen.

ITEM NO. 1.0XX: EXISTING EQUIPMENT

Components:

- .1 KEC relocated all existing equipment that is denoted as "ITEM TO BE REMOVED BY KEC" to an Agency location on site.

ITEM NO. 1.015:**EXHAUST HOOD**

Quantity:

One (1) – Existing to remain during reno

Components:

- .1 KEC to provide Stainless Steel enclosure panels to enclose the hood to the existing ceiling.
- .2 KEC to rework existing wet chemical surface and duct fire suppression system installed in accordance with NFPA-17A:
- .3 KEC to rework/replace existing nozzles and links located to provide full coverage of the, ventilators/equipment under ventilators, plenums and duct collars.
- .4 KEC to replace existing wet chemical cylinders and automans as required to suit new equipment layout.
- .5 All necessary fire suppression system piping.

ITEM NO. 1.017:**EXHAUST HOOD**

Quantity:

One (1) – Existing to remain during reno

Components:

- .1 KEC to provide S.S. enclosure panels to enclose the hood to the existing ceiling.
- .2 KEC to rework existing wet chemical surface and duct fire suppression system installed in accordance with NFPA-17A:
- .3 KEC to rework/replace existing nozzles and links located to provide full coverage of the, ventilators/equipment under ventilators, plenums and duct collars.
- .4 KEC to replace existing wet chemical cylinders and automans as required to suit new equipment layout.
- .5 All necessary fire suppression system piping.

ITEM NO.2.000:**FLOOR DRAIN**

Quantity:

One (1) – by K.E.C.

Nominal Size:

1,520mm long x 304mm wide x 150mm deep

Type:

Custom fabricated stainless steel construction in accordance With the specification for this section.

Components:

- .1 Honeycomb grating.
- .2 Complete with one (1) 50mm drain tailpiece ready for final connection by Mechanical Division.
- .3 Fabricator to verify dimensions on-site prior to fabrication.

ITEM NO. 2.001:**KETTLE, ELECTRIC**

Quantity:

One (1) – by K.E.C.

Manufacturer:

CLEVELAND or equivalent by SOUTHBEND

Model:

KET-12-T

Components:

- .1 Manufacturer's standard components.

Regional Municipality of Peel
Purchasing Division

Document 2020-546P
**LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL**

**Specifications
Section 11 40 00
Food Service
Equipment**

- .2 Stainless Steel equipment stand with drain drawer and splash shield (ST-28)
- .3 Hot and cold (DPK) water faucet with swing spout and mounting bracket (FBKT)
- .4 Kettle Markings (KM).
- .5 Lift Off Cover (CL).

ITEM NO. 2.002: SOUP RETHERM UNIT

Quantity: Six (6) – by K.E.C.
 Manufacturer: VOLLRATH or equivalent by HATCO
 Model: 7217210
 Components: Manufacturer's standard components.

3 Execution

3.1 Site Inspections

- 3.1.1 All dimensions shown on the Drawings or listed in this Section of the Specification are to be considered nominal and for guidance only. It is the responsibility of the Foodservice Equipment Sub-contractor to check dimensions on the site and to co-ordinate any adjustments which may be necessary for the proper fabrication and set-in-place of the foodservice equipment.
- 3.1.2 If significant variances are apparent to the Construction Manager or Foodservice Equipment Sub-contractor which may require changes affecting the intent of the Contract, immediately notify the consultant.
- 3.1.3 Fabricate equipment in sections that will allow easy access into the building and to final location within the foodservice area. Any damage to the building or the equipment will be the Foodservice Equipment Sub-contractor's responsibility.
- 3.1.4 Verify on the job site all actual dimensions of storerooms and walk-in refrigerators and freezers and adjust if necessary the size of shelving units specified in the item specification.
- 3.1.5 Verify all points of access into the job site and ensure that all pieces of equipment or fabricated items installed or relocated are able to pass through doors, hallways etc. in order to arrive at designated location on plans.

3.2 Samples

- 3.2.1 If requested by the Consultant, submit samples of components or fabrication methods, materials or finishes, for review and approval before proceeding with that aspect of the work. Where necessary, request a shop inspection of an assembly which cannot be submitted for approval. Include in the base bid price, the cost of samples which may be rejected.
- 3.2.2 Samples must be the precise articles proposed to be furnished.
- 3.2.3 All samples must be supplied in the required quantity and all except one (1) will be returned.
- 3.2.4 Reviewed samples will become the standard of workmanship and material against which installed work will be checked.

3.3 Delivery Storage Of Equipment

- 3.3.1 The Foodservice Equipment Sub-contractor will coordinate deliveries of equipment in conjunction with construction activity and progress at the site and as dictated by the Construction Manager.
- 3.3.2 The Foodservice Equipment Sub-contractor shall obtain and/or hold equipment ready for delivery in accordance with an agreed schedule which will permit completion of the work at the specific date.
- 3.3.3 Deliver, unpack and set in place all equipment in the designated position, ready for final connection of services, for units with electrical or mechanical connections.
- 3.3.4 Supply to the Construction Manager, in sufficient time, any information or items of service, articles, components or equipment which requires building in or which may overlap or impede the work of others.
- 3.3.5 Provide all necessary information within adequate time and in proper sequence regarding the exact location of openings, chases and any attachments or other fittings required for foodservice equipment.
- 3.3.6 Supply and deliver to the site in sufficient time all inserts, anchors, bolts, sleeves, ferrules and similar items for attaching to, or building into, masonry, concrete and other work for the proper anchorage and fixing of the equipment. Include necessary templates, instructions, directions and/or assistance in the location and installation of all items by other Sub-contractors.

3.4 Installation

- 3.4.1 Supply to all other trades in sufficient time, any services, articles, or equipment that require "building-in" or overlapping coordination. Also notify exact locations of openings, chases, anchors, floor pan, etc., required for the foodservice equipment covered in this Contract.
- 3.4.2 Caulk and seal equipment to walls, base pads, curbs, and adjacent equipment where required.
- 3.4.3 Leave installed work neat, cleaned and polished, well fitted into position, level, and in proper operating condition.
- 3.4.4 Promptly remove all rubbish and debris from the building and site as the work proceeds and on completion.
- 3.4.5 Activate, test and adjust all equipment and apparatus installed under this Contract. Refinish and repair any painted and finished surfaces damaged during erection and installation. Hand over the completed installation in first class condition and working order.
- 3.4.6 Ensure electrical equipment is accompanied by label or certification of approval by Local Authority.
- 3.4.7 Ensure steam pressure equipment is accompanied by a "Certificate of Boiler" to satisfy Federal requirements.

- 3.4.8 Finished work must be perfectly true and plumb with no warping, buckling or open seams. All edges, hidden or exposed must be ground smooth and rounded. Rivet heads, weld marks, or other imperfections are not acceptable.
- 3.4.9 Cutting and repairs for the proper installation of services are part of the work in this Contract.
- 3.4.10 Obtain permits or special inspections. No allowance will be made for costs incurred.
- 3.4.11 Identify equipment with metal plates or labels permanently secured which include, where applicable:
- .1 Manufacturer's name or recognized trademark
 - .2 Complete model identification
 - .3 Model, serial number and U.L. and NSF identifications
 - .4 Electrical characteristics
 - .5 Direction of drive
 - .6 Controls
 - .7 Circuits, lines, etc.
 - .8 Specific operating instructions
- 3.4.12 Identify equipment with temporary labels showing location and Item number per Specifications.
- 3.4.13 After installation has been completed and all items checked and adjusted where necessary for satisfactory operation, arrange for inspection of equipment. If items are found unsatisfactory, make necessary corrections and adjustments.
- 3.5 **Protection And Cleaning**
- 3.5.1 Protect properly and efficiently all work against any damage. Repair without charge to the Agency any damage to equipment and/or building. Cooperate at all times to keep the area clean and free of all rubbish and debris. At the end, clean all equipment to permit immediate use by the Agency without further cleaning.
- 3.6 **Maintenance Manuals**
- 3.6.1 Supply four (4) sets of manuals, bound and labeled, incorporating operating and maintenance instructions, including spare parts list and optional accessories for all items specified.
- 3.6.2 Identify each item, arrange in proper sequence and ensure that the numbers correspond to the specifications and Drawings.
- 3.6.3 Provide an itemized lead sheet at the front of the manual with a list of the contents and the name and phone number of the service company.
- 3.7 **Demonstration**
- 3.7.1 After completion of installation, cleaning, testing and final inspection, instruct the Agency or their authorized personnel in the correct operation and maintenance of the equipment.

-
- 3.7.2 A demonstration shall be made of each piece of equipment requested by the Consultant, and such demonstration shall be carried out by a competent representative of the manufacturer's equipment.
 - 3.7.3 It is the responsibility of the Construction Manager and/or Foodservice Equipment Sub-contractor to correct deficiencies and make adjustments to items which are not functioning properly at the time of demonstration.
 - 3.7.4 The Contractor shall co-ordinate the schedule for equipment demonstrations with the Agency representative, with adequate time allowed for each demonstration.
 - 3.7.5 Submit to the Foodservice Consultant cleaning, final inspection and testing, a schedule of demonstration by the suppliers of purchased equipment. Indicate clearly the timing for each supplier to Start up and demonstrate the proper use and maintenance of their equipment to the Agency.
 - 3.7.6 The Consultant will inspect equipment on substantial completion of work and will issue a deficiency report immediately thereafter. A final inspection will also be made to verify corrected deficiencies.
 - 3.7.7 The Agency reserves the right to inspect equipment at the factory of the Foodservice Equipment Sub-contractor, or at other locations as necessary.
 - 3.7.8 Rejection of any item of equipment, components or fabrication will be based on degree of conformance to the Specification and Drawings, and is subject to the Conditions of the Contract in any matter of dispute.

3.8 **Guarantee**

- 3.8.1 All new equipment shall be guaranteed for a minimum of Two (2) years from the date of facility takeover against defects in material, manufacture, assembly, labour and installation. Those items or components which have inherent guarantee periods beyond this minimum shall be sustained to the maximum time provided by the manufacturer.
- 3.8.2 This guarantee applies to new purchases and fabricated equipment specified under this Division. Repair and/or replace at no cost to the Agency, parts and labour included, any and all equipment covered in this Contract, which proves defective within the guarantee period.
- 3.8.3 The two (2) years warranty shall include service, inspection, and maintenance for the fire extinguishing system as requested by the national and/or local authorities and N.F.P.A. - Code 96.
- 3.8.4 All mechanical refrigeration system components including compressors, condensing units, Refrigeration System and condensers shall be supplied with a two (2) years replacement guaranteed including parts and labour and an additional five (5) year parts guarantee on compressors.

- 3.8.5 If defects become apparent during the guarantee period they shall be made good by the Foodservice Equipment Sub-contractor/supplier or authorized service representative. The supplier means the manufacturer of the equipment item, but under all circumstances it is the responsibility of the Construction Manager/Foodservice Equipment Sub-contractor to maintain the obligation of guarantee whether or not the supplier provides this service.
- 3.8.6 If defects identified at any time during the two (2) years warranty period are not corrected prior to expiration of the warranty period, the warranty period will automatically be extended until the defect is corrected to the "Agency's" or "Consultants" satisfaction.
- 3.8.7 If deficiencies identified at the point of substantial completion of the food equipment installation or during the two (2) year warranty period are not corrected or resolved prior to the expiration of the two (2) year warranty period, the warranty period will automatically be extended until such time as the outstanding deficiency is corrected to the "Agency's" or "Consultants" satisfaction.
- 3.8.8 The guarantee shall not apply where it can be clearly shown that a defect or malfunction is due to misuse or neglect by the Agency or their representatives.
- 3.8.9 The guarantee period shall commence upon acceptance of the equipment by the Agency, or such date(s) as may be mutually agreed upon after facility takeover of the work. In no event shall the period of guarantee begin later than the date upon which the lien holdback expires.
- 3.9 **Inspection, Rejection And Factory Testing**
- 3.9.1 The Agency and Consultant reserve the right to inspect the fabrication of any items at the fabricating plant and they may reject any equipment which does not comply with Plans and/or Specifications. The Contractor will replace without charge all rejected material or equipment within (10) days or rejection.
- 3.9.2 Factory test and verify all items such as cold pans, refrigerated display cases, ice cream freezers, custom built refrigerators, etc., to be sure that they are in proper working order before shipment. Inform the Consultant of the date of these tests in advance in writing so that he may observe and inspect these items in the ship if necessary. Advise the Consultant when installation is complete and ready for inspection.

END OF SECTION

1. **GENERAL**

1.1. **General Requirements**

- 1.1.1 Division 1 General Requirements of the Contract, are a part of this Section and shall apply here.
- 1.1.2 The Contractor shall be responsible for all work contained in this section of the specification including the work provided by the:
- .1 Foodservice Division 11 40 00;
 - .2 Electrical Division 26;
 - .3 Plumbing Division 22;
 - .4 Other trades subcontractors.
 - .5 Temporary Mobile Trailer supplier;
 - .6 Contractor (provision of temporary services to units).
- 1.1.3 ABBREVIATIONS – Refer to Drawings included in this Document
- | | |
|----------|---|
| S.S. | -Stainless Steel |
| C/W | -Complete With |
| A.F.F. | -Above Finished Floor |
| A | -Amperes |
| V | -Volts |
| CY | -Cycle |
| P | -Phase |
| Pl. lam. | -Plastic Laminate |
| Kw | -Kilowatt |
| kPa | -Kilopascals |
| J.B. | -Junction Box |
| L/S | -Litres per Second |
| L.E.D | -Light Emitting Diode |
| mm | -Millimetres |
| C | -Celsius |
| C.P. | -Chrome Plated |
| I.P.S. | -Inside Pipe Size |
| N.I.C. | -Not in Contract (for Section 11 40 00) |
| L.C. | -Load Centre |
| CBP | -Circuit Breaker Panel |
| FES | -Foodservice Equipment Sub-contractor |
| KEC | -Kitchen Equipment Contractor |

1.2. **Related Work By Other Trades**

- 1.2.1 Work provided by Electrical Division 26
- .1 Provide temporary electrical requirements for the trailers as indicated on the Drawings noted in this Document.
 - .2 Supply, rough-in, installation and connection of all necessary electrical wiring in liquid tight flexible conduit (AC-90) required for the operation of, but not limited to the foodservice equipment and Temporary Mobile Trailer units unless otherwise stated in Part 1.3 of this Section of the Specification.
 - .3 Supply and installation of electrical wiring from the building source or distribution point of power, through disconnect

-
- switches or starters to the terminals, connection box, circuit breaker panel or plug receptacles located on the equipment.
 - .4 Supply, rough-in and installation of all electrical wiring for "Agency's Supplied", "Existing" or "NIC" designated equipment, as well as the final hook-up or connections.
 - .5 Supply and installation of all waterproof electrical receptacles located in floors, ceilings or walls.
 - .6 Capping off of electrical wiring required for any equipment designated as "REMOVED".
 - .7 Disconnect of all food service equipment that will be relocated during the floor replacement.
 - .8 Re-connect all food equipment that will be relocated back to the original location as indicated in the food service Drawings.
 - 1.2.2 Work Provided By Mechanical Plumbing – Division 22
 - .1 Provide temporary mechanical requirements for the trailers as indicated on the Drawings noted in this Document.
 - .2 Supply, installation, rough-in, and connection of all domestic hot and cold water, drains as per code from building supply to the point of connection required for the complete operation of, the foodservice equipment and Temporary Mobile Trailer.
 - .3 Supply and installation of domestic hot and cold water lines complete with shut off valves, back flow preventers, line strainers, shock absorbers, pressure, temperature and pressure gauges and control valves or devices (unless otherwise stated and/or supplied with the equipment of this section).
 - .4 Supply and installation of drain lines complete with traps, vent piping and clean outs.
 - .5 Connection of all equipment designated as "Agency Supplied".
 - .6 Capping off of mechanical services required for any equipment designated as "REMOVED".
 - .7 Use chrome plated piping wherever exposed.
 - .8 Disconnect of all food service equipment that will be relocated during the floor replacement.
 - .9 Re-connect all food equipment that will be relocated back to the original location as indicated in the food service Drawings.
 - 1.2.3 Work provided by other trades
 - .1 Provision of temporary mechanical and electrical connection for the mobile trailer units.
 - .2 Construction of all ramps, walkways, walls, partitions or ceilings, openings therein and finishes thereon.
 - .3 Provision of all core hole drilling through building structural slab, walls or roof to accommodate refrigeration lines, electrical conduit, plumbing lines, gas lines and exhaust/make-up air ducting etc.
-

- .4 Supply and setting of sleeves in floors, walls and ceiling (as well as any related core drilling) for electrical, mechanical refrigeration, plumbing and gas lines etc.

1.3. **Work Included By Mobile Trailer Contractor**

1.3.1 General

- .1 The work listed here applies to the following foodservice sub sections:
 - .1 Mobile Trailers and Associated Equipment
- .2 This Sub-Contractor to coordinate with the Contractor and Region of Peel representatives for the supply, position and final connections (of mechanical and electrical services provided by the Contractor trades) of the following:
 - .1 28' long x 8"4 1/8" wide x 12'3" high Kitchen Trailer with the following:
 - .2 3 Basin Kitchen Sink.
 - .3 Hand Sink with eye wash station.
 - .4 2 x Double Convection Oven – Blodgett.
 - .5 4 Burner Range with Oven – Garland G24-4L.
 - .6 40 Gallon Kettle Cleveland KGL-40-TSH
 - .7 Reach-In Refrigerator – True T-49-HC.
 - .8 Chest Freezer.
 - .9 Type K Fire Extinguisher.
 - .10 On-demand hot water heater.
 - .11 Waste water discharge.
 - .12 On-demand gas water heater.
 - .13 Grey water tank.
 - .14 20' long x 8"6" wide high Walk-in Refrigerator located at grade.
 - .15 20' long x 8"6" wide high Walk-in Freezer located at grade.
 - .3 Refer to Drawings within this Document for all related information for units.
 - .4 Location of units will at loading dock of the building for the cooking trailer and the Freezer/Cooler Trailer.
 - .5 Upon Contract award, this Contractor to provide Drawings of the units located in the loading dock. Drawings to provide all MEP requirements and related equipment.

1.3.2 Electrical

- .1 All work shall comply with the standards for material and workmanship specified under Division 26.

1.3.3 Mechanical

- .1 All work shall comply with the standards for material and workmanship specified under Division 22.

1.4. **Work Included By This Contractor**

1.4.1 General

- .1 The work listed here applies to the following foodservice sub sections:
 - .1 Relocation of existing Foodservice Equipment
 - .2 The work listed here includes, but is not limited to, the provision of all equipment indicated on the Drawings and listed in the specifications together with labour, material, tools, plant, delivery, uncrating, setting-in-place of equipment, ready for final connection of services by mechanical and electrical trades.
 - .3 Coordination with the construction schedule of the delivery and set-into-place of all large foodservice equipment that may not fit through normal building doorways.
 - .4 KEC to relocate all existing equipment as shown on Drawings to temporary storage area location on site.
- 1.5. **Quality Assurance**
- 1.5.1 The Work of this section shall be executed by qualified Mobile Trailer Manufacturer.
- 1.6. **Proposal Format**
- 1.6.1 Comply with Division 1, General Requirements and all Documents referred to therein.
- 1.7. **Alternatives And Substitutions**
- 1.7.1 Refer to Division 1 - General Requirements.
- 1.8. **Certificates Of Approval**
- 1.8.1 Conform to all laws, bylaws, rules, regulations and requirements of all authorities having jurisdiction.
- 1.8.2 All electrical equipment must conform to the Canadian Hydro Electrical Code, the Electrical Inspection Department Bulletins, the Ontario Hydro Electric Safety Code and the Canadian Standards Association. All equipment must have a C.S.A. approval label. Equipment that is not C.S.A. approved will be rejected, removed from the site and substituted for at no additional cost to the Contract.
- 1.8.3 Any plumbing or drainage systems shall conform to the Plumbing Code and Ontario Water Resources Act except as modified by regulations and bylaws of authorities having jurisdiction.
- 1.8.4 Each piece of equipment shall be accompanied by a label or certificate of approval.
- 1.8.5 All mechanical refrigeration system shall be supplied with safety relief valves, shut-off valves for each piece of equipment and all other items as required by local regulations.
- 1.8.6 Equipment design and fabrication must conform with the National Sanitation Foundation and Provincial as well as Local Municipal Health Department Regulations.

1.9. **Permits**

1.9.1 This Contractor shall be responsible to obtain and pay for all relevant permits or special inspections. No extra allowances will be considered for costs incurred.

1.10. **Drawing And Mechanical And Electrical Requirements**

1.10.1 Provide Drawings, product data and samples as requested.

2. **DRAWINGS**

2.1. **Itemized Equipment Specifications**

2.1.1. The following numbers correspond to those on the Foodservice Equipment Drawings.

2.1.2. Where a manufacturer's name and model number is indicated, the item shall be supplied with all standard components, features and materials whether specifically identified or not, and shall be considered inherent in this specification.

2.1.3. Items identified as custom fabricated shall be constructed of stainless steel unless otherwise specified. Refer to detail Drawings at the end of this section for general fabrication methods for all items.

2.1.4. Verify mechanical and electrical services on existing equipment to be reused. Include in bid all modifications or adjustments to this equipment which are necessary to meet the mechanical and electrical services as shown on plans and specifications.

2.1.5. Mechanical and electrical characteristics of existing equipment indicated in the schedules are from manufacturers published literature sheets. These are to be considered nominal, or a guide only. Actual mechanical and electrical characteristics of existing equipment must be confirmed by the Foodservice Equipment Sub-contractor.

2.1.6. Relocate all existing equipment to be reused.

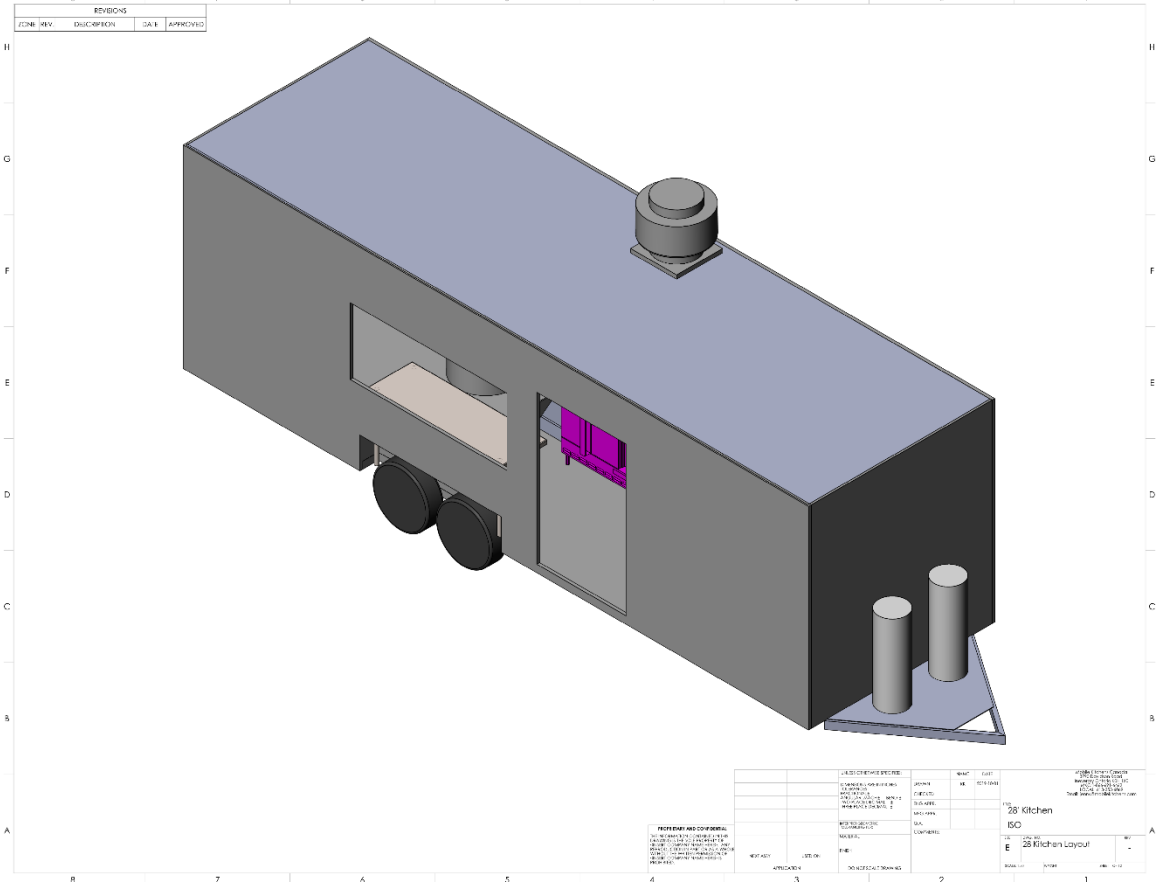
2.1.7. Visit the existing site to fully examine the scope of work related to the modification and/or refurbishing of existing equipment to be reused.

2.1.8. Approved alternative manufactures must supply a product that is equal in performance to the specified item.

2.1.9. Itemized Specification –

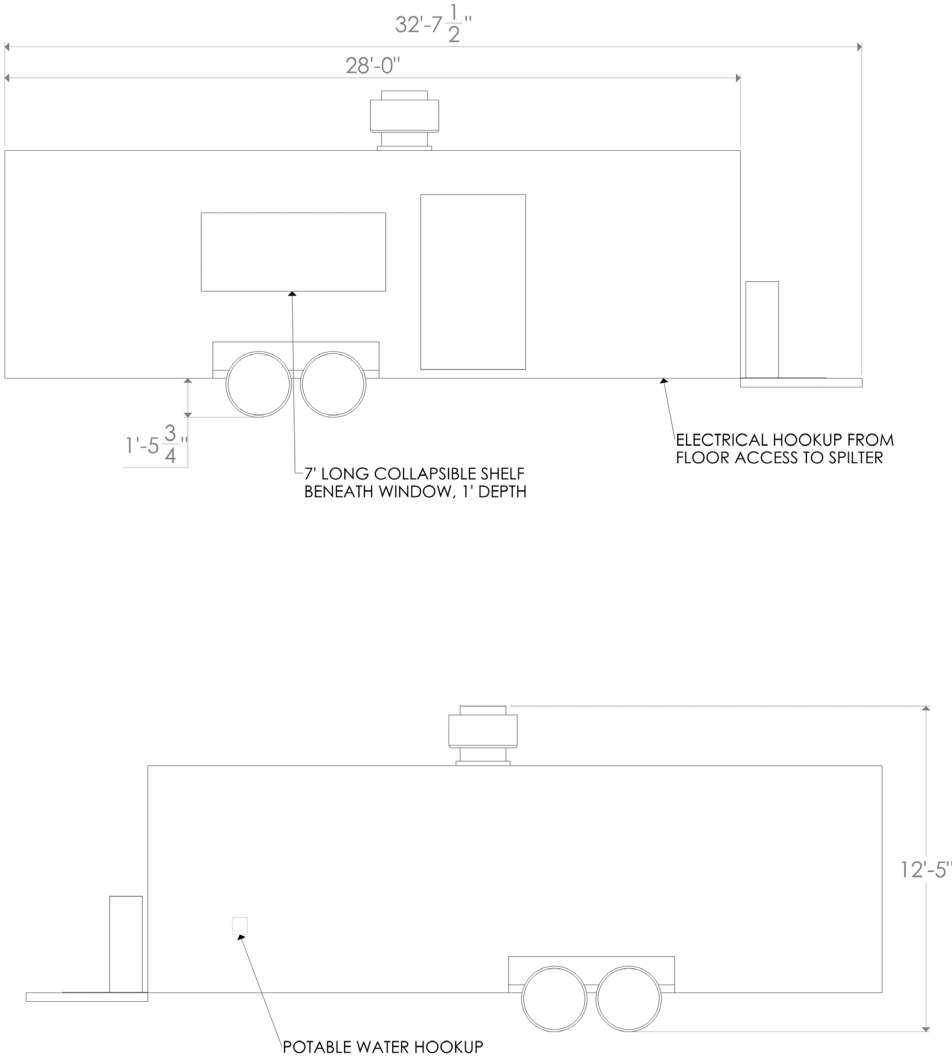
LEVEL 1- MAIN KITCHEN

Mobile Trailer:

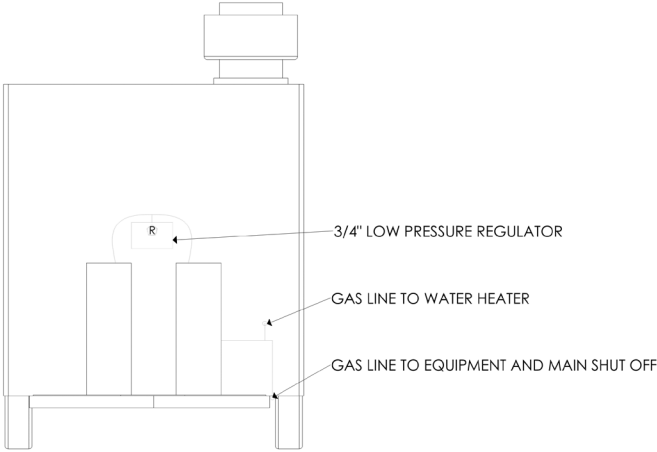
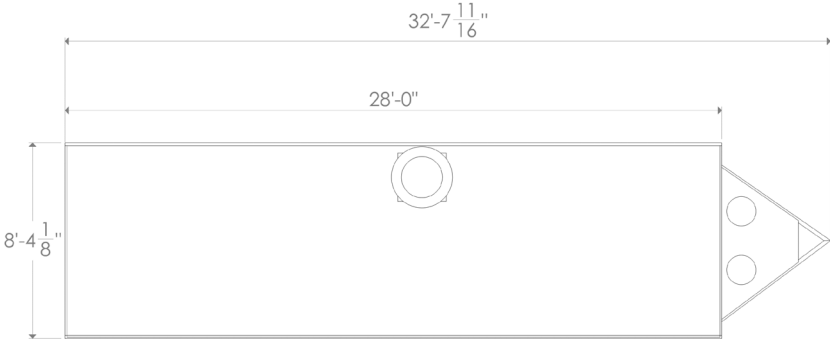


Regional Municipality of Peel Document 2020-546P
Purchasing Division LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL

Specifications
Section 11 41 00
Trailer
Equipment

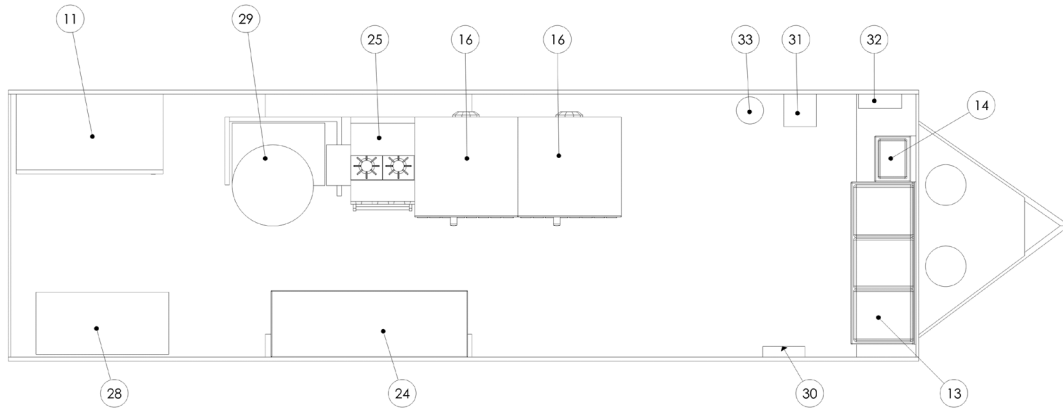


NOTES:
POTABLE WATER HOOK UP SIZE 3/4-8 MPT



Regional Municipality of Peel **Document 2020-546P**
Purchasing Division **LOCALIZED INTERIOR RENOVATIONS**
AT VARIOUS LONG-TERM CARE FACILITIES
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Specifications
Section 11 41 00
Trailer
Equipment



EM NO.	PART NUMBER	DESCRIPTION	QTY.	Revision
1	T-49-HC	Reach-In Solid Swing Door Refrigerator	1	
2	Triple Compartment Sink 60 x 24 x 36-47	Triple Compartment Sink, 60" x 24" x 36"/47"	1	
3	Tarrison Wall Mount Hand Sink 17 x 15.25	Hand Sink Wall Mount 17" x 15.25	1	
4	DFG100 Double RI	Blodgett - DFG100 Double RI	2	
5	Work Table 72x24x35	Work Table 72" x 24" x 35" S.S.	1	
6	G24-4L	4 BURNER RANGE	1	
7	Range Hood		1	
8	Wall Mount Shelf	48"L x 15"D x 10" H	1	
9	Wall Mount Shelf	120"L x 12"D x 10"H	1	
10	Wall Mount Shelf	78"L x 16"D x 10"H	1	
11	Wall Mount Shelf	78"L x 12"D x 10"H	1	
12	Chest Freezer		1	
13	KGL-40-TSH	40 GALLON KETTLE	1	
14	60A Electrical Panel		1	
15	55gal Potable Water Tank		1	
16	On Demand Gas Water Heater		1	
17	BFR-15	Fire Suppression	1	
18	Flo Aire		1	

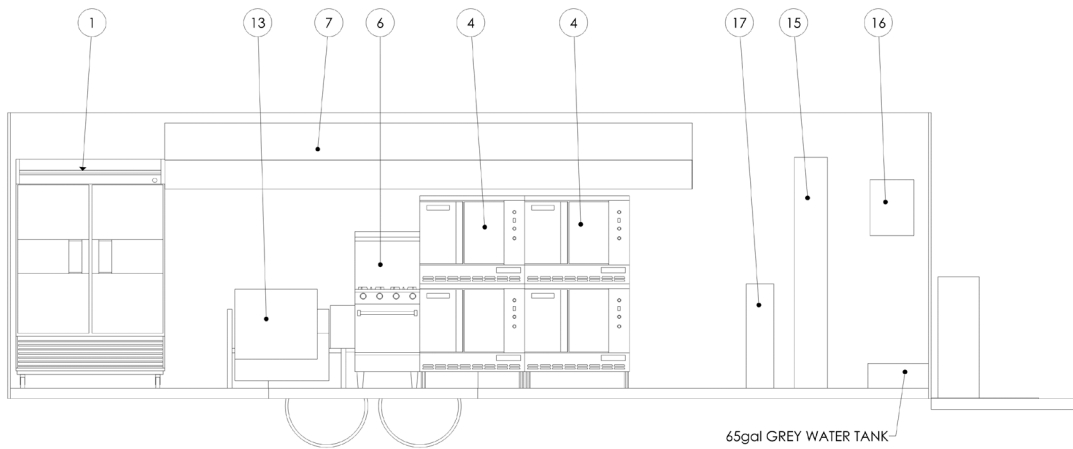
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DATE	BY	DESCRIPTION
2019-10-01	EE	38' Kitchen Floor Plan
	E	28' Kitchen Layout

DO NOT SCALE DRAWING

Regional Municipality of Peel Document 2020-546P
Purchasing Division LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL

Specifications
Section 11 41 00
Trailer
Equipment



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14	60A Electrical Panel		1	
15	55gal Potable Water Tank		1	
16	On Demand Gas Water Heater		1	
17	BFR-15	Fire Suppression	1	
18	Flo Aire		1	

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 REVISIONS: []
 MATERIALS: []
 SPECIFICATIONS: []
 TRADE PLACE SPECIFIC: []

DATE: 08/11/2020

NAME: []
IC: []

PROJECT: 28' Kitchen
LOCATION: Road Side
NO.: 28 Kitchen Layout

APPROVALS:
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 ARCHITECT: []
 ELECTRICAL: []
 MECHANICAL: []
 PLUMBING: []
 FIRE: []
 SAFETY: []

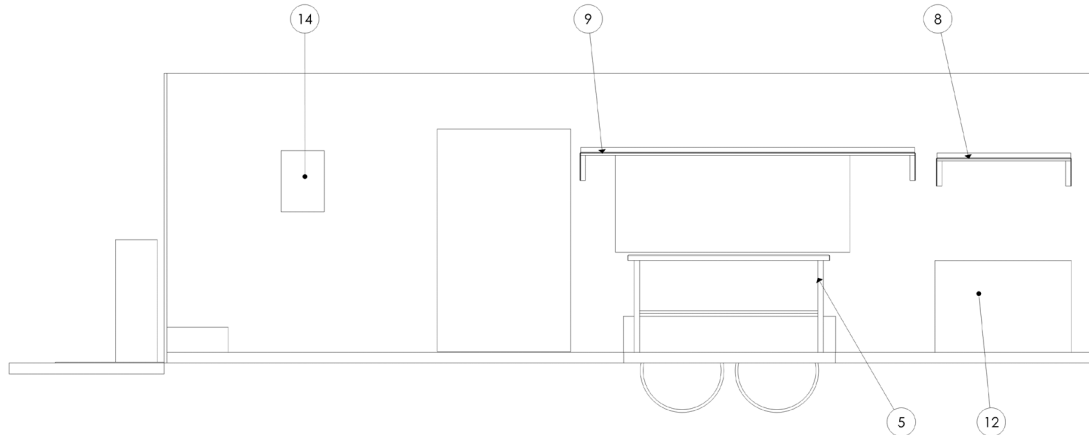
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Regional Municipality of Peel Purchasing Division Document 2020-546P LOCALIZED INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE FACILITIES WITHIN THE REGION OF PEEL

Specifications Section 11 41 00 Trailer Equipment



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	Revision
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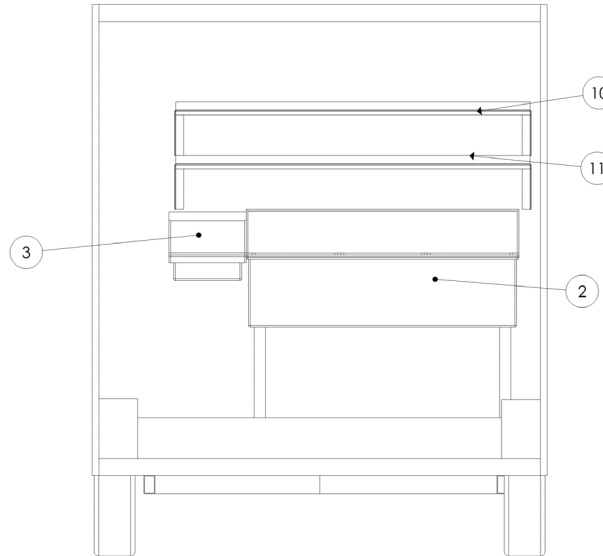
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 THE INFORMATION CONTAINED HEREIN IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR CONTRACT PURPOSES
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 ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED

NAME	DATE
ENGINEER	2019-10-01
DATE	

28 Kitchen
 Curto Side
 E 28 Kitchen Layout

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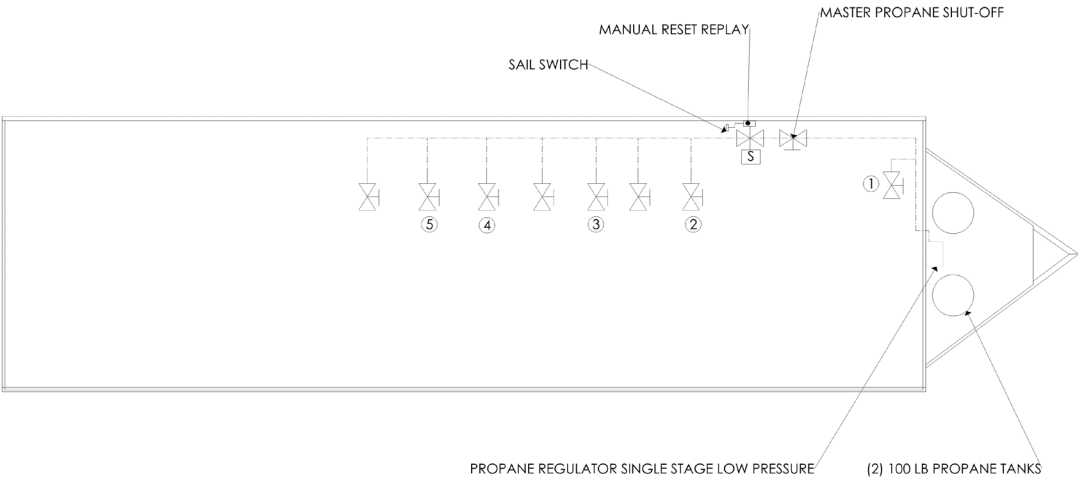


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16	On Demand Gas Water Heater		1	
17	BFR-15	Fire Suppression	1	
18	Flo Aire		1	

UNLESS OTHERWISE SPECIFIED:		NAME
DIMENSIONS ARE IN INCHES	FRACIONS	DRYAN
FRACIONS	DECIMALS	KK
ANGLES IN DEGREES	BRND :	CHECKED
THREE PLACE DECIMALS	ENG APPR:	ENG APPR:
	MFG APPR:	MFG APPR:
	G.A.	COMMENTS:
	MATERIAL	
	DATE	
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	USED ON	
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Regional Municipality of Peel Document 2020-546P
Purchasing Division LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
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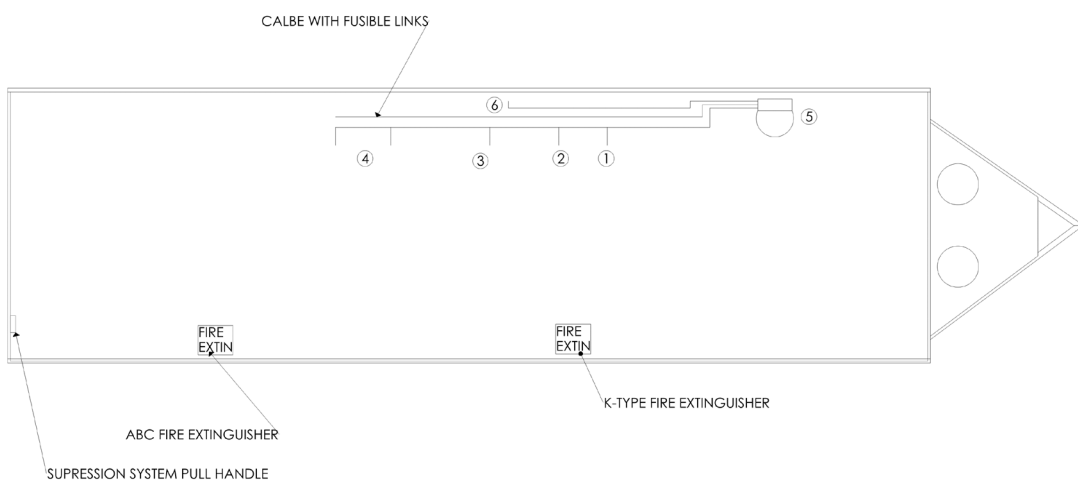
Specifications
Section 11 41 00
Trailer
Equipment



- ① GAS HOT WATER HEATER
- ② DOUBLE CONVECTION OVEN
- ③ DOUBLE CONVECTION OVEN
- ④ BURNER WITH OVER
- ⑤ 40 GALLON KETTLE

UNLESS OTHERWISE SPECIFIED	NAME	DATE	SCALE

NOTES:
 FIRE SUPPRESSION SYSTEM:
 BUCKEYE KITCHEN MISTER
 CANISTER TYPE: BFR-15



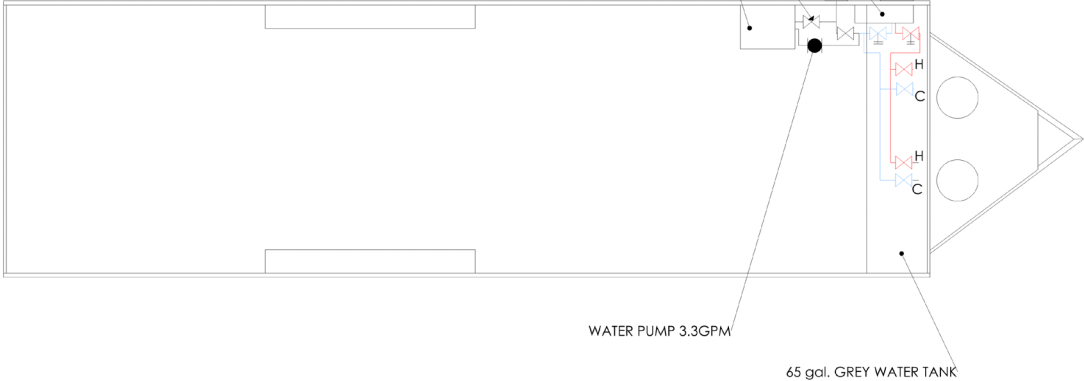
- ① 4 BURNER WITH OVER
- ② DOUBLE CONVECTION OVEN
- ③ DOUBLE CONVECTION OVEN
- ④ 40 GALLON KETTLE
- ⑤ FIRE SUPPRESSION CONTROL/CANISTER
- ⑥ HOOD FAN

UNLESS OTHERWISE SPECIFIED	NAME	DATE	SCALE

NOTES:

ON DEMAND HOT WATER HEATER
PROPANE
17,500-140,000 BTU
120VAC, 60Hz

WASTE WATER DISCHARGE
ON DEMAND GAS WATER HEATER
POTABLE WATER HOOKUP
FRESH WATER FILL VALVE
55 GAL. POTABLE WATER TANK



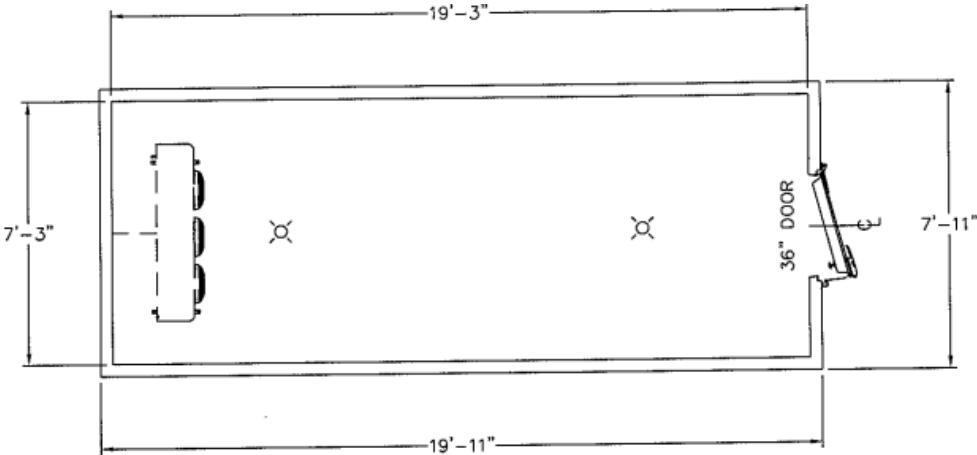
- H C HOT/COLD TAPS, SHUTOFFS
- H/C HOT WATER TANK PORTS
- WATER PUMP

NO.	DESCRIPTION	DATE	BY	CHKD.
1	ISSUED FOR CONSTRUCTION	2014-10-17	JE	JE
2	DESIGN CHANGES INCORPORATED	2014-10-17	JE	JE

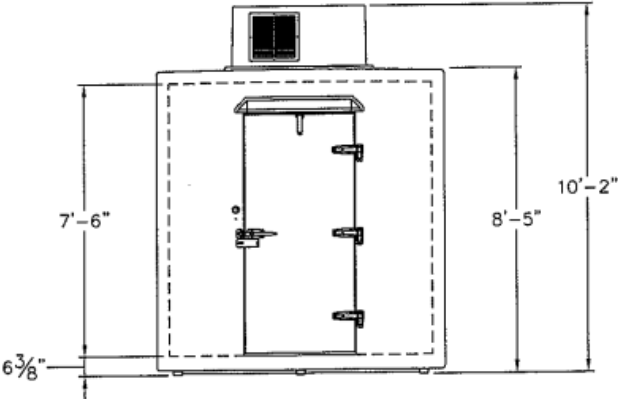
Cooler and Freezer Pod:



20x8 Cooler
Electrical Requirements: 30 amps, 208-230 Volt, single phase

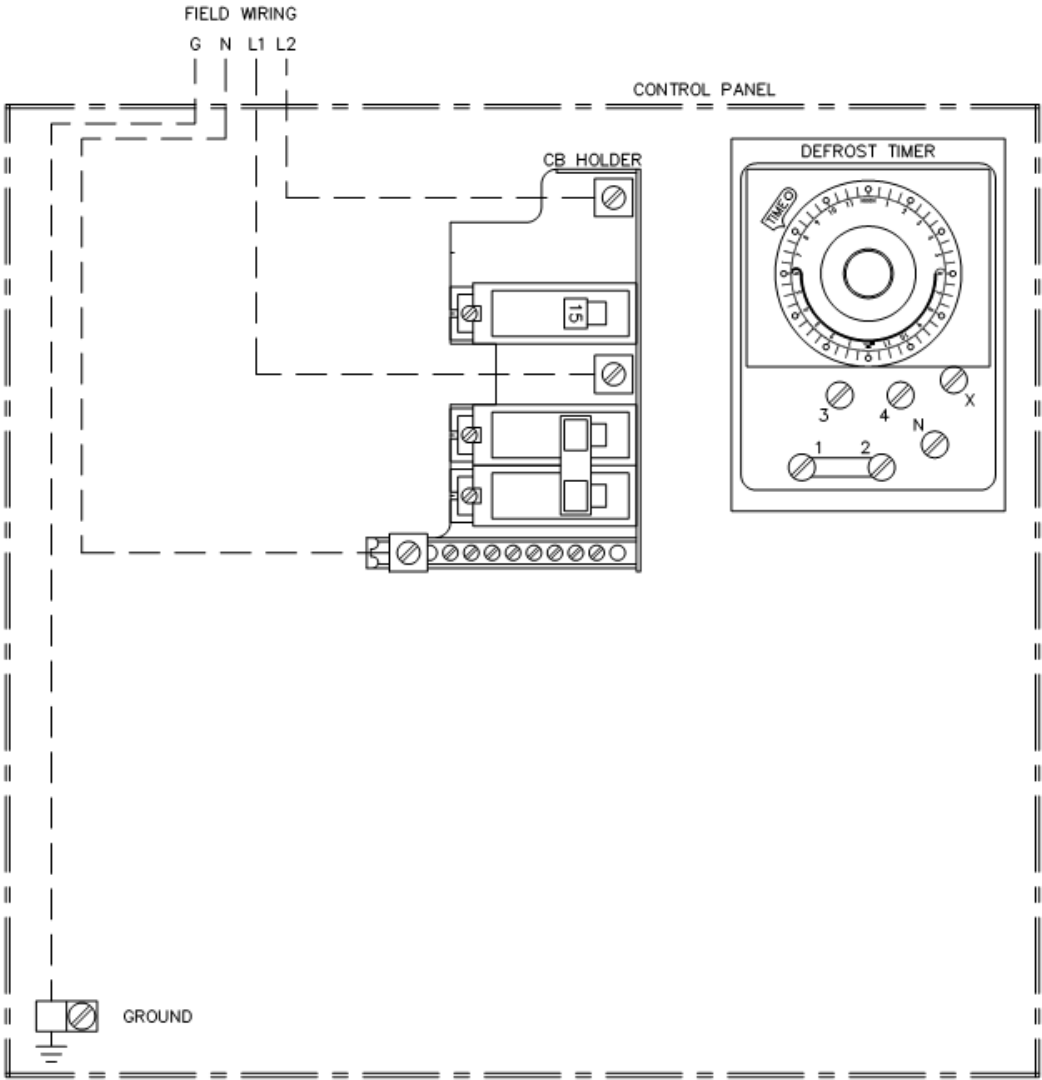


PLAN VIEW



ELEVATION VIEW

TYPICAL WIRE CONNECTIONS



WIRING INSTRUCTIONS

CONTROL PANEL IS LOCATED AT THE CONDENSING UNIT ON TOP OF THE WALK-IN. A HOLE MAY BE DRILLED THRU THE FIBERGLASS CONDENSING UNIT COVER FOR INCOMING POWER. ELECTRICAL HOOK-UP MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE

END OF SECTION

1 GENERAL**1.1 General**

1.1.1 Conform to Sections of Division 1 as applicable.

- .1 This Section applies to and governs the Work of all Mechanical Sections.
- .2 Where other Mechanical Trades Sections conflict with requirements specified in this Section the Specifications of that particular Section govern.

1.2 Related Sections

- 1.2.1 Conform to Section 26 01 00, Electrical General Requirements.
- 1.2.2 Excavating, backfilling and rough grading for mechanical Work: Item 3.1.6, Excavation and Backfill.
- 1.2.3 Flashings for Mechanical Work located on or passing through roof except integral flashing collars on equipment and piping where available as standard or optional component: (Asphalt Roofing).

1.3 Description

1.3.1 Provide Work in accordance with the full intent and meaning of the Drawings and Specifications as required to result in complete operating systems.

1.4 Apportionment of The Work

1.4.1 Classify and apportion all materials and the performance of all labour to the several trades involved in accordance with all local customs, rules, regulations, jurisdictional awards, decisions, etc., insofar as they may apply and as required to efficiently execute the Work involved in this Contract.

1.5 Permits and Fees

- 1.5.1 Building Permit will be obtained by the Consultant and will be provided to the Contractor. Obtain all other permits required for the installation of mechanical trades Work, arrange for inspections and tests therewith and pay all fees and costs for the permits, inspections and fees. Obtain permits immediately after notification of award of Contract.
- 1.5.2 Obtain copies of Drawings from the Engineer for submission with application for permits.

1.6 Materials and Equipment

- 1.6.1 All new material proposed shall match existing.
- 1.6.2 Bear all costs for modification of curbs and floor resulting from failure to notify the Engineer prior to installation of equipment or fabrication or construction of opening framing and curb.

1.7 Submittals

- 1.7.1 Shop Drawings

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- .1 Submit Shop Drawings in accordance with the General Conditions of the Contract for items hereinafter listed which are exactly as specified. Supplement Shop Drawings with brochures where necessary or as required. The initial submission of Shop Drawings for any one trade shall include a checklist of all related specified items for that trade to ensure complete submittal and review.
 - .2 Stamp as follows: SHOP DRAWINGS FOR RECORD PURPOSES ONLY - CHECKED FOR CONSTRUCTION IN ACCORDANCE WITH CONTRACT DOCUMENTS.
 - .3 Record purpose submissions shall include:
 - .1 Plumbing Fixtures
 - .2 Plumbing Specialties
 - .3 Piping Specialties
 - .4 Submit seven copies of such Drawings or Brochures to the Engineer, who will review such Drawings or Brochures. If items are not as specified, re-submit five corrected copies.
 - .5 Submit Shop Drawings electronically for all other mechanical equipment in accordance with the requirement outlined in the General Conditions of the Contract.
 - .6 Prepare Shop Drawings specifically for this Work by qualified drafters and in sufficient detail to avoid decisions being made in the shop or field.
 - .7 General Shop Drawings showing more than one size or model will not be considered unless properly marked up.
 - .8 Include performance data and characteristic curves with all fan and pump Shop Drawings.
 - .9 Submit Shop Drawings for suspension systems for all suspended equipment. Indicate the location of suspension for the equipment, the maximum load at each of the suspension points, the size of suspension rods or members and details of supplementary structural steel framing members.
 - .10 Include wiring diagrams and schematics for all equipment which has electrical controls or devices furnished with the equipment. Wiring diagrams alone are not sufficient; schematic and interconnecting Drawings, and sequence of operation of equipment are required for review.
 - .11 Clearly indicate the materials and/or equipment being supplied, all details of construction, finish, accurate dimensions, capacities and performance on Shop Drawings and brochures. Have all Drawings certified correct for construction by the manufacturer, before submission. Identify equipment Shop Drawings with designations as shown on the Drawings or in the Specifications. If not complied with, Shop Drawings will not be reviewed and will be returned to the Contractor.
 - .12 Each Shop Drawing and/or brochure must bear the stamp and signature of a responsible official in the Contractor's and the
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Subcontractor's organization for each submission as evidence that the Drawing has been checked against the requirements as called for in the Specifications and Drawings. Also, in the case where the equipment attaches to and/or where there is external wiring connecting to other equipment, that it has been properly coordinated with this equipment, whether supplied under this or other Contracts.

- .13 Revisions to Shop Drawings will not be allowed after they are reviewed unless further review and submission is required.
- 1.7.2 Record Drawings: Maintain an accurate dimensional record of all underground piping and all deviations and changes in above ground piping, ductwork and equipment from the Contract Drawings. Transfer this information to two (2) sets of record Drawings filed at the job site and submit to the Engineer at the completion of the job.
- 1.7.3 Installation and Start-up Instructions: Furnish three copies of installation instructions and three copies of start-up instructions for any item of equipment when requested by the Engineer.

1.8 **Quality Assurance**

1.8.1 Regulatory Requirements

- .1 Conform to governing Municipal or Federal Codes, Rules and Regulations and/or Authorities having jurisdiction.
- .2 Codes and Standards referred to hereinafter are by inference, in each case, the latest issue of the Specified Code or Standard, including all revisions and amendments thereto as adopted and published at date of proposal closing.
- .3 Do all work and supply all equipment in accordance with the requirements and recommendations of the latest issue of the applicable standards and codes of the:
 - .1 National Standards of Canada (NS Can)
 - .2 Canadian General Standards Board (CGSB)
 - .3 Canadian Standards Association (CSA)
 - .4 Canadian Building Code O. Reg. 403/97, as amended
 - .5 Canadian Fire Code
 - .6 Ministry of Labour
 - .7 Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)
 - .8 National Research Council Canada – Model Energy Code of Canada for Buildings 1997
 - .9 American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2001 - Energy Standard For Buildings Except Low-Rise Residential Buildings.
 - .10 Ontario Building Code O Reg. 350/06

2 **PRODUCTS**

2.1 **Pipe Sleeve Seals**

- 2.1.1 Thunderline "Link-Seal" Series LS.

- 2.1.2 Fernco.
- 2.1.3 Thermacor.
- Or approved equal.

2.2 **Bonding Agents**

- 2.2.1 Sika "Sikadur 32" Hi-Mod.
- 2.2.2 Probond.
- 2.2.3 Dupond
- Or approved equal.

2.3 **Access Doors**

- 2.3.1 Acudor.
- 2.3.2 Titus.
- 2.3.3 Williams (S.M.S.).
- 2.3.4 E.H. Price.
- Or approved equal.

2.4 **Isolating Unions**

- 2.4.1 EpcO.
- 2.4.2 Marpac "Petro".
- 2.4.3 Corrosion Service.
- Or approved equal.

3 **EXECUTION**

3.1 **General Construction Requirements**

- 3.1.1 General:
Conform with applicable requirements of the Occupational Health and Safety Act and Regulations for Construction Projects, Ontario Regulation 213/91 Amended to O. Reg 527/00.
- 3.1.2 Measurements and Deviations:
 - .1 Where any parts of the mechanical work are specifically located by dimensions on the Drawings, check and verify these dimensions on the site prior to installation.
 - .2 Before installing piping, review Architectural and Electrical Drawings with Mechanical Drawings. Where interference may occur and departures from arrangements as shown are required, consult with other trades involved, come to agreement as to changed locations or elevations and obtain approval of the Engineer for proposed changes before proceeding with the Work.
 - .3 Examine Work of other trades or Sub-contractors, prior to commencement of mechanical installations. Report in writing, to the Engineer, any discrepancies which will affect mechanical installations. Failure to do so shall be considered acceptance of the conditions.
 - .4 Where Site conditions require minor deviations from indicated arrangements or locations, make such changes on approval of the Engineer without additional cost to the Engineer.

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- .5 Should any discrepancies occur during installation of mechanical Work which will necessitate major revisions to the mechanical trades Work or the Work of other trades or Sub-contractors, notify the Engineer immediately and obtain their written authorization before proceeding with the Work.
 - 3.1.3 Scaffolding and Hoisting Equipment
 - .1 Do not drill, cut or weld the building steel or building structure for erection of materials or equipment without prior written approval of the Engineer.
 - 3.1.4 Overloading
 - .1 During installation of mechanical Work, do not load any part of the building structure with a load greater than it is capable of bearing. Bear full responsibility should any accident occur or damage result through the violation of this requirement.
 - .2 Any temporary supports used during installation must be as strong as permanent supports.
 - 3.1.5 Attachment to Building Construction
 - .1 Use welding studs of size not larger than 10mm for attaching miscellaneous materials and equipment to building steel. If the weight of materials or equipment require bolts or studs larger than 10mm dia., use steel clips or brackets, secured to building steel by welding or bolting as approved by the Engineer.
 - .2 Use self-drilling expansion type concrete inserts for securing miscellaneous equipment and materials to masonry or concrete construction already in place, of sufficient number and size to prevent concrete from breaking away. The use of powder or power actuated fasteners will not be allowed unless prior written approval is obtained from the Engineer.
 - .3 Support rods for any suspended item must not be attached to or extended through steel pan type roofs or through concrete slab roofs.
 - .4 Furnish beam clamps of 2-bolt design and of such type that the rod load is transmitted only concentrically to the beam web centreline. The use of "C" and "I" beam side clamps, etc., will not be allowed without written consent of the Engineer.
 - .5 Where the roof or floor framing consists of open web or long span steel joists, ensure that hangers are located at or within 150mm of the joist top or bottom chord panel points, otherwise provide additional structural steel as required where hanger spacing does not coincide with joist spacing. Design suspension assembly such that the hanger load is transmitted only concentrically to the supporting joist. Do not use "C" and "I" beam side clamps, brackets, etc., without written consent of the Engineer.
 - .6 Locate secondary structural steel members between joists at or within 150mm of top or bottom chord panel points. Where the secondary structural steel member cannot be located at
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or near a joist panel point, provide additional diagonal structural steel web member/members designed for the applicable load to the nearest panel point in the opposite chord member. This condition may be waived if the load to be suspended between panel points is not in excess of 45 kg. Diagonal hangers which will induce lateral stresses in the chord members of the joist will not be permitted. Submit Shop Drawings of the suspension assembly indicating the location of suspension or support points, the maximum load at each suspension point, location and size of hangers, brackets and intermediate framing members when required, and also details of connection to building structure.

3.1.6 Cutting, Patching, Excavation and Backfill

- .1 Cutting of holes up to 200mm in diameter and related patching shall be done under Mechanical Division. Holes and other openings larger than 200mm in diameter, all chases, bulkheads, furring and related patching shall be done under Division 1. Read same for detailed information regarding cutting and patching.
- .2 Do not cut, remove or burn structural parts or sections of the building, whether they are steel, concrete or masonry, without the written authorization of the Engineer.
- .3 Should cutting, repairing, and patching of previously finished Work of other trades be required to allow installation of mechanical Work, pay all costs for the trade concerned to perform the Work.
- .4 Perform necessary excavating for Work of this Division. Ensure bottoms of trenches are excavated so that full length of each pipe will be supported on solid bed of undisturbed earth. Build approved concrete pad, solid block or concrete piers properly reinforced under piping below grade where solid undisturbed earth bed is not obtainable to meet Plumbing Code.
- .5 Remove excavated materials not used as backfill from site unless otherwise directed.
- .6 Perform necessary pumping to maintain excavations free of water for work of this Division until backfill is completed.
- .7 Provide 100mm bed of 20mm crusher run limestone compacted to 98 percent (%) Modified Proctor under all piping not laid in sandy ground or other approved bedding. For copper and plastic piping, bedding shall be clean sand.
- .8 Backfill at least first 150mm above top of piping with clean coarse sand hand placed in 75mm layers and compacted to 98% density Proctor Modified (ASTM #D1527). Note conditions and Details and conform thereto.
- .9 Backfill inside building with M.T.C. granular 'B' or clean coarse sand in 150mm layers mechanically compacted to give minimum of 98% density Modified Proctor (ASTM #D-1527)

STD) compaction.

- .10 Backfill under all existing, new and future concreted, paved or gravelled areas with M.T.C granular 'B' placed in 150mm layers and compacted to 98 percent (%) Modified Proctor Compaction to level of sub-base of paving or gravel.
- .11 Perform x-ray of all surfaces before any cutting or excavation begins and verify presence of any buried services.

3.2 **Equipment Installation**

3.2.1 General:

- .1 Erect equipment in a compact, neat and professional manner. Align, level and adjust for satisfactory operation. Install in such a manner that connecting and disconnecting of piping and accessories can be made readily and that all parts are easily accessible for inspection, operation, maintenance and repair.
- .2 Install and start up items of equipment in complete accordance with the manufacturer's printed installation and operating instructions.

3.2.2 Firestopping and smoke seal:

- .1 Be responsible for installation of firestopping and smoke seal inside mechanical assemblies (i.e. fire dampers).
- .2 Firestopping and smoke seals around outside of mechanical assemblies, where they penetrate fire rated separations shall be part of Work of Section 07 84 00, Firestopping and Smoke Seals and shall be carried out under supervision of this Division.
- .3 Be responsible for any additional cost incurred as a result of oversizing of openings during cutting and patching operation of openings to be firestopped up to 200mm in diameter
- .4 Noise and Vibration: Select noise and vibration levels of equipment and systems to conform to design intent. If unnecessary noise or vibration should be created by any mechanical equipment and systems and transmitted to occupied portions of building or other mechanical Work, make all necessary changes and additions as approved by the Engineer without additional cost.
- .5 Lubrication: Lubricate all equipment prior to start up, in accordance with the manufacturer's printed instructions. Provide all lubrication including sufficient quantity for drainage and refilling of oil sumps, etc., when required by manufacturer's instructions.

3.3 **Piping Construction Methods**

3.3.1 General:

- .1 Unless specified otherwise herein, construct and install all piping in accordance with ANSI Sections B31.1 to B31.9 as applicable to service, except that soldered joints will not be permitted in compressed air piping.

- .2 To avoid unnecessary cutting of masonry, provide inserts, sleeves and anchors to other trades for building in as the Work proceeds. Arrange with other trades to leave openings, slots and chases to accommodate later installation of mechanical Work.
 - .3 Inspect pipe and fittings for soundness and clean of all dirt and other foreign matter immediately prior to installation. Reject all damaged items.
 - .4 Install piping in the most direct, straight and functional manner possible. Except where otherwise shown, install all vertical lines plumb, and run horizontal lines parallel to building walls. Install piping close to walls, partitions and ceilings. On multiple runs of piping, space piping to allow for installation of insulation and for proper servicing of valves.
 - .5 Ensure that trenches for piping below grade are dry and firm when laying pipe.
 - .6 In fill areas, provide a minimum clearance of 100mm on all sides of the pipe passing under or through building grade beams to prevent possible damage from settling of building. If a greater settlement can be expected, increase the clearance to prevent possible damage.
 - .7 Conceal all piping in finished areas and rooms within walls or ceilings, and in furred spaces elsewhere. Provide access doors or panels as hereinafter specified for access to concealed piping specialties etc.
- 3.3.2 Lines, Grades and Slopes:
- .1 Install piping in conformity with elevations and grades indicated on the Drawings using axis lines and bench marks provided under General Construction; verify such axis lines and bench marks. Each trade shall lay out their Work and be responsible for lines, elevations, measurements, etc., required for installation of their Work.
 - .2 Slope piping drains and sewers as indicated on the Drawings. Install so that slope between elevations shown on the Drawings is even and constant.
 - .3 When slope is not shown on the Drawings, install piping to the following slopes:
 - .1 Drainage piping - 1:50 on drains of NPS 75mm size and less and 1:100 on drains of NPS 100mm and larger. In special circumstances as provided for under the Codes and Regulations and the express approval of the Engineer, drains of NPS 100mm size and larger may be laid at a lesser slope.
 - .2 Domestic water lines - pitch to low points so that all lines may be completely drained. Natural gas - slope down 1:1000 in direction of flow.
- 3.3.3 Pipe Joints:
- .1 Ream all pipe ends and thoroughly clean all dirt, cuttings and

foreign matter from pipe after cutting and threading. Thoroughly clean all fittings, valves and equipment before connections are made. Cut copper tubing with a tube cutter and clean the joining surfaces of the tubing and fitting with fine emery cloth. Wipe clean with a dry cloth.

- .2 Make screwed joints with Teflon tape or Masters metallic compound with the compound applied to the male threads only and particular care taken to prevent the compound from reaching the interior of the pipe or fittings.
- .3 Install sleeve type couplings for cast iron plain end soil pipe, such as Titan Foundry Type MJ, or Bibby MJ Series 2000 or Dayton in strict accordance with manufacturer's printed instructions.
- .4 Make joints on cast iron bell and spigot soil pipe with either neoprene compression type preformed gaskets such as Bibby "Bi-seal", or lead and oakum with a minimum of 0.5kg of lead per 25mm of pipe diameter, and caulk in such a manner to produce a permanently tight joint. Cold caulking compound in cord form such as W.R. Meadows PC4 may also be used. Assemble preformed neoprene gaskets to manufacturer's printed instructions.
- .5 Assemble mechanical joint on ductile iron pressure pipe with cast iron gland, rubber sealing gasket and high strength malleable iron bolts in accordance with the manufacturer's recommendations.
- .6 Install couplings, fittings, etc. on grooved end piping systems in accordance with manufacturer's printed instructions.
- .7 Make soldered joints on copper tubing in accordance with the following usage:

<u>Service</u>	<u>Solder</u>	<u>Type</u>
.1	Dom. Hot and Cold water	lead free with matching flux
.2	Drain, Waste, Vent	50/50 with matching flux

- .8 Do not use core type solder. Use solder conforming to ASTM requirements.
- .9 Unless more stringent methods of inspections are specified the Engineer will visually inspect welded joints for fusion of metal, icicles, alignment, etc. Remove any defects and remake the joint to their satisfaction.

3.3.5 Unions and Flanges:

- .1 Provide unions or flanges in the following locations:
 - .1 For bypasses around equipment or control valves or devices in piping systems.
 - .2 At connection to steam traps and in by-passes around traps.
 - .3 At connections to equipment. Locate between shut-off valve and equipment.

- .4 In screwed or solder joint drainage tubing at inlet side of trap.
 - .2 Do not conceal unions in walls, partitions or ceilings unless access thereto is provided.
 - .3 Provide dielectric unions or isolating type companion flanges at all connections between copper tubing and ferrous piping.
 - .4 Assemble flanged joints with appropriate flanges, gaskets and bolting. Provide clearance between flange faces such that the connections can be gasketed and bolted tight without undue strain on the piping system with flange faces parallel and bores concentric. Centre gaskets on the flange faces so as not to Project into the bore. Lubricate bolts before assembly to assure uniform bolt stressing. Machine off raised face flanges when joining to a flat companion flange and use a full face gasket.
- 3.3.6 Fittings:
- .1 The use of couplings between fittings, valves or equipment, will not be permitted except on long runs in pipe sizes NPS 50mm or smaller. Where the length of pipe between fittings requires a connection, make the joint by welding. Do not use running couplings in any pipeline.
 - .2 Fittings and ancillary items installed in systems operating at pressures in excess of 103 kPa (15 psig) must be registered in accordance with CSA B51.
 - .3 Use eccentric reducing fittings in locations where piping changes size and at connections to equipment and control valves, to provide proper drainage or venting of the lines. Do not use bushings.
 - .4 Tee connections in welded piping may utilize either of the following:
 - .1 Factory fabricated standard buttweld fittings.
 - .2 Bonney Forge "Weldolets", "Thredolets" or "Sockolets".
 - .5 Mitering, notching or direct welding of branches to mains, will not be permitted.
 - .6 Use standard pipe fittings for changing direction of piping. No mitered joints or field fabricated pipe bends are permitted. Use long radius welded steel elbows unless short radius elbows are specifically authorized by the Engineer.
 - .7 In copper tubing, direct connection of branch into main using "T-Drill" method may be used where allowed by Ontario Building Code.
- 3.3.7 Piping Connections to Mains
- .1 Make down feed piping connections of all water piping to horizontal supply and return mains to the bottom quadrant of the mains.
- 3.3.8 Sleeves
- .1 Install sleeves where piping passes through foundations, above grade floors and walls. Fabricate sleeves of Sch. 40

- black steel pipe or type "K" copper tubing for installation in foundations or floors, and of 1mm (20ga.) galvanized sheet steel where installed in above grade walls.
- .2 Sleeves for piping passing through roofs will be supplied and installed under other Contracts or under Roofing Section, unless specifically shown otherwise on the Drawings.
 - .3 Make sleeves large enough to pass full thickness of pipe covering where same is used, and with sufficient clearance between pipe and sleeve to allow for any lateral movement of piping due to expansion and contraction.
 - .4 Terminate sleeves flush with finished ceilings, walls and floors on grade. For piping passing through floors above grade extend sleeve a minimum of 75mm above the floor.
 - .5 For pipes entering structures from below grade, seal the annular space between sleeve and pipe with prefabricated seals.
 - .6 In the case of pipes passing through firewalls or through walls, partitions or floors which are considered as serving as fire stops and in partitions around washrooms, seal the space around the pipe, in the sleeve.
 - .7 Fill sleeves for future use with lime mortar.
 - .8 Assume all responsibility for the setting of all sleeves necessary for this Work in masonry walls during construction or in concrete forms before concrete is poured.
 - .9 Coat exterior surface of all sleeves of ferrous material with a heavy asphalt emulsion.
 - .10 Firestopping shall be installed and applied as required by NBCC and FMOG-ENG-4003. Fire stopping shall be in accordance with CAN/ULC-5115: Fire tests of Firestop Systems.
- 3.3.9 Escutcheon Plates
- .1 Provide escutcheon plates on bare piping passing through finished walls or floors.
 - .2 Use escutcheon plates made of cast brass or stamped metal, either one to be heavy chromium plated and, if constructed in two pieces, fitted with substantial hinges and positive latches. Provide plates with tempered springs to ensure positive attachment to the pipe.
- 3.3.10 Valves
- .1 Supply and install valves in all locations shown on the Drawings, at all piping connections to equipment, at all connections to control valves or control devices, and where required for sectionalizing a system or floor.
 - .2 Use gate or butterfly valves for shut-off purposes and globe or plug valves for throttling purposes.
 - .3 Install check valves wherever required to ensure flow of liquid in one direction.
 - .4 Provide drain valves with hose thread outlet connection or

valve with long nipple on outlet at all low points of each water system and above all riser or branch stop valves for proper drainage of lines.

3.3.11 Piping Subject to Freezing

- .1 Where horizontal or vertical piping is run along an outside building wall and concealed in a pipe space, circulation of interior air shall be maintained in the pipe space by means of air grille(s) located at the top and bottom of pipe space, facing the interior of building
- .2 Where horizontal piping is run in a ceiling space under uninsulated roof, the insulated pipe shall be encased in slab insulation on both sides and top and circulation of interior air shall be maintained in the encasement by means of air grilles located in the ceiling below, facing down into the interior of the building. The spacing of grilles shall be not less than 3000mm o.c.

3.3.12 Air Venting: Install all vents at high points of all water piping systems and connect to nearest drain.

3.4 **Concrete Inserts**

- 3.4.1 Install all inserts required for attachment of hangers, either for suspension of piping or equipment.
- 3.4.2 For masonry or poured concrete construction use expansion type units. Insert into the concrete after concrete has cured. Anchors or inserts installed by explosive means shall not be used.

3.5 **Access Doors**

- 3.5.1 Supply access doors for installation by other trades in walls or ceilings where accessibility is required for the operation and/or maintenance of concealed valves, traps, cleanouts, dampers and control equipment. Unless otherwise specified on the Drawings or in other divisions of the Specifications, or as required to replace or repair said equipment, provide access doors at least 200mm x 200mm size, fabricated of bonderized steel, with concealed hinges and screwdriver lock. Provide doors of a type and fire rating to suit the particular type of wall or ceiling construction in which they are to be installed.
- 3.5.2 All access panels and doors shall be Acudor BP58 Bauco Plus Access Doors or equivalent from alternate manufacturers listed above.

3.6 **Sterilization Of Potable Water Systems**

- 3.6.1 Flush each system after completion by allowing full flow of water through the system for a period of fifteen minutes or longer when directed by the Engineer.
- 3.6.2 After flushing of the system is completed, provide a 24 hour contact sterilization treatment by treating the water with 50 ppm of chlorine as recommended in AWWA Specification C-651. After sterilization

period has elapsed, flush system to reduce chlorine content to an acceptable level.

3.7 **Pressure Tests**

- 3.7.1 Make specified pressure tests on all piping included in this Contract. Furnish all pumps, compressors, gauges and connectors necessary for the tests.
- 3.7.2 Conduct tests in the presence of the Engineer and all other personnel of governing authorities having jurisdiction. Notify all parties in ample time to permit them to be present. Conduct tests before piping is painted, covered or concealed.
- 3.7.3 Conduct hydrostatic tests for a minimum period of two (2) hours, or longer when requested by the Engineer or governing authority at the test pressure specified under the respective Section of the Specifications
- 3.7.4 During this time the pressure shall remain constant and the exterior surfaces of pipe or fittings shall not show any cracks or other form of leak.
- 3.7.5 For pneumatic tests, first pressurize the system with air to approximately one-half the specified pressure but not to exceed 345 kPa (50 psig) and examine all joints for leaks with a soapsuds solution. After any repairs have been made and the soap test has been met satisfactorily, pressure the system with air to the test pressure specified under the respective Section of the Specifications.
- 3.7.6 Promptly correct any defects that develop through tests and re-test to the complete satisfaction of the Engineer and other parties involved.
- 3.7.7 Forward copies of all final tests on all pressure and drainage piping and a copy of governing authority approvals to the Engineer immediately on acceptance of tests and/or approvals.
- 3.7.8 Final payment for the Work will not be made until the above has been received.

3.8 **Cleaning, Testing and Approval Records**

- 3.8.1 Maintain records of all pressure tests and flushing and sterilization tests, glycol/water concentrations, inspections and approvals by the Plumbing Inspector, etc. and forward these to the Minister on completion of the Work. Provide Engineer with copy of records on completion of each test, cleaning operation, etc.

3.9 **Adjustment and Operation of Systems**

- 3.9.1 When the Work is complete, adjust all equipment items of the various systems for proper operation within the framework of design intent, and the operating characteristics as published by the equipment manufacturer.
- 3.9.2 Note: Additional instructions are specified under the respective Sections of this Division.

3.9.3 The Engineer reserves the right to require the services of an authorized representative of the manufacturer in the event that any item of equipment is not adjusted properly. Arrange for such services and bear all incurred costs thereof. After completion of adjustments, place the systems in full operating condition and advise the Engineer that the Work is ready for acceptance.

3.10 **Acceptance**

3.10.1 After all equipment has been installed and adjusted and all systems balanced, conduct performance tests in the presence of the Engineer. Arrange the time for these tests at the convenience of the Engineer. Conduct tests under climatic circumstances to ensure complete and comprehensive tests and of such a manner and duration as the Engineer may deem necessary.

3.10.2 During these tests, demonstrate the correct performance of all equipment items and of the systems they comprise. Should any system or any equipment item fail to function as required, make such changes, adjustments or replacements necessary to meet the performance requirements. Repeat tests until these requirements have been fully satisfied and all systems accepted by Engineer.

3.11 **Interference & Detail Drawings**

3.11.1 Prepare and submit for approval, at least 6 copies of Interference and Detail Drawings, minimum 1/50 scale, to co-ordinate Work of this Division with all other Sections.

3.11.2 Make Interference Drawings in conjunction with all parties and trades concerned showing sleeves and openings and passage of piping and ductwork through building structure. Drawings shall also show inserts, special hangers and other features to indicate routing through confined spaces, installation of silencers and other such items in such areas.

3.11.3 Provide 1:25 scale Detail Drawings, fully dimensioned, of piping, ducts and equipment in ceilings. Base equipment Drawings on "Reviewed" Shop Drawings and include, but do not necessarily limit to, details pertaining to access, clearances, tappings, sleeves, electrical connections, drains and service spaces and integral control Drawings.

3.12 **Performance Testing And Balancing**

3.12.1 Assume responsibility for testing, balancing and placing all air handling and liquid systems in operation, prior to final acceptance in presence and under direction of Engineer.

3.12.2 Standard test sheets are appended to this Section. Fill out applicable sheets during performance tests, start-up procedures, and commissioning procedures. Submit 3 copies to Engineer prior to acceptance.

3.12.3 Provide all instruments required to test and balance systems. Install test probe inlets in ductwork and equipment in locations selected by

the Engineer. Balance systems in accordance with design requirements indicated on the Drawings. Report to the Engineer immediately any deficiencies in the systems or equipment performance resulting in design requirements being unobtainable.

- 3.12.4 On completion of testing and balancing of all systems, submit to Engineer a typewritten report (four copies) of findings, including complete data of fan performance, static pressures, air quantities, final readings at all outlets, and ampere readings of all motors, taken at motor terminals when equipment is operating under full load conditions.
- 3.12.5 Submit with each copy of the report, complete sets of duct layout prints neatly marked in red ink, showing all locations at which test readings were taken, the air volume, velocity and static pressure in each supply and return duct, and the final reading at all outlets. Obtain duct layout prints for mark-up purposes from the Engineer.

3.13 **Special Instructions, Existing Systems & Materials**

- 3.13.1 Remove all existing unused pipes. Cap unused pipes tight to mains, concealed inside floor, walls or ceilings in professional manner. Remove discontinued piping except where buried or otherwise noted.
- 3.13.2 All unused material shall be removed from site. Removed materials shall not be reused, be removed from site, not be allowed to accumulate and become property of Contractor unless otherwise noted.
- 3.13.3 Verify fully all existing systems and site conditions as required to ensure proper operation of all new equipments and systems. Also clean and adjust existing systems to full extent for full operation of new system to be installed. Clean and power flush all existing sanitary lines to entire length to existing mains outside of building for proper operation of new. Allow for video inspection of buried lines for its size, elevation and condition.
- 3.13.4 Before proposal submission verify existing services and extent of work involved on site. Verify routes of new pipes through existing building. Relocate existing ducts, pipes, conduits, etc. in way of new pipes as required. No extra will be allowed due to any existing conditions.
- 3.13.5 In existing Kitchen, disconnect all services connected to existing equipment. Removal and placing of existing equipment at same location is by Contractor. After equipment have been reinstalled to original locations reconnect all services in a manner as prior to disconnect. Replace existing branch valves union, with new.
- 3.13.6 All damaged surfaces shall be restored to its original condition to approval.

3.14 **Warranty**

- 3.1.4 Prior to the end of the one-year and two-year warranty periods following the date of Substantial Performance of the Work, perform

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with the Consultant and the Agency inspections of the Work and review any defects or deficiencies which have been observed and reported during that period. Perform appropriate repairs to the Work in accordance with the Construction Contract Documents.”

END OF SECTION

-
- 1 **GENERAL**
- 1.1 **Summary**
- 1.1.1 Section Includes
- .1 Labour, products, equipment and services necessary to complete the Work of this Section.
 - .2 Section includes, but is not necessarily limited to, the following:
 - .1 Design of automatic sprinkler systems.
 - .2 Preparation of working Drawings.
 - .3 Incorporation of facilities and equipment in an overall fire protection system.
 - .4 Wet pipe sprinkler system(s).
- 1.2 **Reference Standards**
- 1.2.1 Comply with the latest edition of the following:
- .1 National Fire Protection Association
 - .1 NFPA 13 - Installation of Sprinkler Systems.
 - .2 Ontario Building Code.
- 1.3 **Design Criteria**
- 1.3.1 Design Submissions
- .1 Proposed sprinkler system for this project is a design built system on basis of criteria specified. Prepare complete Drawings of fire protection system. Drawings shall include:
 - .1 Drawings and calculations bearing stamp of a Professional Engineer employed by the Fire Protection Company and who is registered as a member of the Association of Professional Engineers of the Province of Ontario. Drawings shall be prepared in conjunction with existing conditions at building and Architectural Detail Drawings showing ceilings, bulkheads, ceiling pockets. Also include related information at the building, building features, interferences and provide sprinkler protection system to suit. Sprinkler Drawings included with proposal set do not show these details and must be added to Shop Drawings.
 - .2 Drawings shall show existing sprinklers, pipe layout with sizes and proposed revisions. Submit four (4) copies of plans, hydraulic design calculation sheets, Shop Drawings and equipment submittals to Consultant for review prior to commencement or Work.
 - .3 Submit reviewed Shop Drawings to local municipal authority and obtain their approval before proceeding with any work.
 - .4 Provide systems in accordance with approved Drawings, subject to inspection and testing requirements of Agency's Insurance Underwriter and Consultant.
-

- .5 Drawings shall include building existing sprinkler system layout with pipe layout to five (5) meters beyond demolished/new partition and shall rectify deficiency if already present or created due to partitions revisions.
- .6 Provide fire protection system in consideration to all details on Architectural Drawings.
- .7 Revise Drawings incorporating all comments and submit eight (8) copies to all concerned trades.
- .2 Water Flow Test Data
 - .1 Perform water flow test and use as basis of hydraulic calculations. Pay all cost associated with flow test.

1.4 **Submittals**

- 1.4.1 Shop Drawings
 - .1 Submit Shop Drawings in accordance with Section 01 30 00, Instructions to All Trades.
- 1.4.2 Samples
 - .1 Submit samples for the following:
 - .1 Each type of sprinkler.
 - .2 Signs.

1.5 **Quality Assurance**

- 1.5.1 Qualifications
 - .1 An accredited member in good standing of the Canadian Automatic Sprinkler Association.
 - .2 Has done five (5) similar Projects.

1.6 **Codes & Regulations, Permits, Costs & Fees**

- 1.6.1 Comply with local Approving Authorities, O.B.C., Agency's Insurance underwater and/or Authorities having jurisdiction.
- 1.6.2 The building permit will be obtained by the Consultant and will be provided to the Contractor. Sprinkler Contractor to apply for and obtain permits for sprinkler system being proposed and pay costs levied for permit, inspections and any other fees.
- 1.6.3 Comply with the Building Code.
 - .1 Revisions issue: latest version as amended to date.

2 **PRODUCTS**

2.1 **GENERAL**

- 2.1.1 All equipment and apparatus to be ULC listed and labelled, and FM approved.

2.2 **Sprinkler Heads**

- 2.2.1 Ratings
 - .1 ULC and FM listed for fire service.
 - .2 Standard orifice size: 12mm diameter orifice or 13mm diameter orifice recessed.

-
- .3 Standard temperature rating: 57 degrees Celsius (°C) to 74 degrees Celsius (°C).
 - .4 Intermediate and high temperature rating heads to suit local conditions.
 - .5 Must be matching type of existing sprinklers and system.
- 2.2.2 Type
- .1 Indicated by type in accordance with the following:
 - .2 No ceilings
 - .1 Upright, bronze body, bulb type.
 - .3 T-bar ceilings
 - .1 Semi recessed bulb type with escutcheons.
 - .4 Side wall
 - .1 Side wall, chrome plated body and escutcheon plate, fusible solder type.
 - .5 Spare heads and cabinet
 - .1 Each sprinkler system: ULC approved metal cabinet containing required number of spare sprinkler heads of each type and temperature rating.
 - .2 Wrench for removal and replacement of sprinkler heads.

2.3 **Pipe & Fittings**

- 2.3.1 Unburied mains and sprinkler piping: standard black steel Schedule #40 (ASTM #A53) with black cast iron 1207 kPa WWP screwed or flanged fittings, U.L.C. approved. Victaulic or Couplox couplings and fittings with Butyl gaskets conforming to CSA #B242 may be used where approved by Insurance Underwriter and local authority.
- 2.3.2 Where approved by Engineer and local authority and Underwriter, Schedule 10 pipe and factory fabricated welded assemblies using ANSI #B16.9 factory made fittings may be used. **DO NOT THREAD SCHEDULE 10 PIPE.**

2.4 **Pipe Hangers**

- 2.4.1 ULC listed for fire protection services in accordance with NFPA.

3 **EXECUTION**

3.1 **GENERAL**

- 3.1.1 Apportionment of the Work
 - .1 Classify and apportion all materials and the performance of all labour to trades involved in accordance with all local customs, rules, regulations, jurisdictional awards, decisions, etc., insofar as they may apply and as required to efficiently execute the Work involved in this Contract.
 - 3.1.2 Measurements and Deviations
 - .1 Examine existing system, existing conditions at building and Work of other Trades or Sub-contractors prior to commencement of fire protection installations. Immediately report in writing to Consultant any discrepancies on the part of any other Sub-Contractor which will affect fire protection
-

installations. Failure to report discrepancies shall be considered acceptance of conditions.

- .2 Where site conditions require deviations from indicated arrangements or locations, make changes on approval of Consultant without additional cost to Agency.
- .3 Any discrepancies of fire protection work which will necessitate major revisions, immediately notify Consultant five (5) working days before proposal submission.

3.2 **Installation**

3.2.1 Sprinkler Heads

- .1 In T-bar ceilings, locate heads in centre of ceiling tile to present an orderly appearance.

3.2.2 Flushing of Piping

- .1 Flush sprinkler system piping in accordance with NFPA requirements and local Authorities.
- .2 Flush underground piping and lead-in connections before connection is made to sprinkler system risers and local Authorities.

3.3 **Piping**

3.3.1 General

- .1 Hang or support piping with miscellaneous structural supports and braces as may be required, unless Drawings or other Sections of the Specifications state otherwise.
- .2 Provide new pipe and fittings free from rust and scale of full weight, standard size and thickness, true and round with full cut threads. Cut pipes true with clean sharp pipe cutters. Ream and file ends of pipe and remove burrs from interior. Use reducing fittings instead of bushings wherever reductions in piping occur.
- .3 Provide new pipe and fittings free from rust and scale of full weight, standard size and thickness, true and round with full cut threads. Cut pipes true with clean sharp pipe cutters. Ream and file ends of pipe and remove burrs from interior. Use reducing fittings instead of bushings wherever reductions in piping occur.

3.3.2 Materials and Fabrication

- .1 Conform to CAN/CSA-S16.1M for materials, design of details and execution of the Work.
- .2 Conform to CAN/CSA-G40.21-M grade 300W for structural shapes, plates, etc.
- .3 Conform to the latest issue of the following CSA Specifications.
 - .1 CSA W47.1 - for qualification of welders
 - .2 CSA W48.1-M - for electrodes (only coated rods allowed)

-
- .3 CSA W59-M - for design of connections and workmanship
 - .4 CAN/CSA W117.2-M - for safety
- 3.3.3 Obtain Consultant's approval on site before installation of all exposed pipes.

3.4 **Testing**

3.4.1 Requirements

- .1 Execute fire protection systems and equipment tests in accordance with NFPA requirements.
- .2 Minimum hydrostatic test of not less than 1380 kPa pressure for two hours, or at 345 kPa in excess of maximum static pressure developed in system, if maximum static pressure is in excess of 1034 kPa.
- .3 Furnish pumps, gauges and other equipment required to complete test.
- .4 Execute tests in presence of Consultant and Agency's authorized representative.
- .5 Promptly repair defects which develop during tests, and then re-test system to complete satisfaction of authorized inspectors.
- .6 Submit a certificate covering materials and tests to Underwriter's Inspection Authority, together with a request for inspection and approval of complete fire protection system. On receipt of approval, forward certificate to Agency.

3.5 **Special Instructions**

- 3.5.1 Work has to be done in existing building. Verify all existing conditions including pipes, locations, and existing systems before proposal submission. For any discrepancy bring to Consultant's attention five working days prior to proposal closing. No extra will be allowed due to any existing conditions.

END OF SECTION

- 1 **GENERAL**
- 1.1 **References**
- 1.1.1 ANSI B16.18-[1984], Cast Copper Alloy Lead Free Solder Joint Pressure Fittings.
- 1.1.2 ASTM B88M-[89], Specification for Seamless Copper Water Tube (Metric).
- 1.1.3 MSS-SP-80-[1987], Bronze Gate, Globe, Angle and Check Valves.
- 2 **PRODUCTS**
- 2.1 **Piping**
- 2.1.1 Domestic hot, cold and recirc systems, within building.
- 2.1.2 Interior Water Piping: Type 'K' or 'L' hard copper with solder pressure fittings for unburied NO ferrous piping, fittings, bushings or plugs shall be used. Provide Dielectric bushings at connections to ferrous materials. All copper water piping shall be certified for compliance with the ASTM B88-83 Standard, with certification markings on same.
- 2.1.3 Buried pipes shall be Type 'K' only with no buried joints.
- 2.2 **Fittings**
- 2.2.1 Cast bronze threaded fittings, Class 125 and 250: to ANSI/ASME B16.15.
- 2.2.2 Cast copper, solder type: to ANSI B16.18.
- 2.3 **Joints**
- 2.3.1 Solder/brazing: lead free silver solder.
- 2.3.2 Teflon tape: for threaded joints.
- 2.4 **Ball Valves**
- 2.4.1 NPS 2 and under, soldered:
- .1 To ANSI B16.18, Class 150.
- .2 Bronze body, chrome plated brass ball, PTFE Teflon adjustable packing, brass gland and [PTFE Teflon] [Buna N] seat, steel lever handle, with NPT to copper adaptors.
- .3 Acceptable material: Crane, Toyo, Red & White.
- 2.5 **Pipe Insulation**
- 2.5.1 25mm thick, vapour barrier, fire retardant, in compliance to Ontario Building Code.
- 3 **EXECUTION**
- 3.1 **Installation**
- 3.1.1 Install in accordance with Ontario Plumbing Code and local authority having jurisdiction.
- 3.1.2 Cut square, ream and clean tubing and tube ends, clean recesses of fittings and assemble without binding.
- 3.1.3 Assemble all piping using fittings manufactured to ANSI standards. Connect water line to existing main serving existing building.
- 3.1.4 Install pipes suspended from building structure, conserve headroom and space. Group exposed piping and run parallel to walls.

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3.1.5 Connect to fixtures and equipment in accordance with manufacturer's instructions.

3.2 **Valves**

3.2.1 Isolate equipment, fixtures and branches with ball valves.

3.3 **Pipe Insulation**

3.3.1 Insulate all domestic cold water, hot water and recirc lines.

3.4 **Disinfection**

3.4.1 Flush out, disinfect and rinse system to requirements of authority having jurisdiction approval of Consultant and Local Plumbing Inspector. Upon completion, provide laboratory test reports on water quality to Consultant and submit to authorities having jurisdiction.

3.5 **Verification**

3.5.1 Verify location of existing services and route of new pipes thru building. For any discrepancies report to Consultant prior to five (5) working days before proposal closing.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Summary**
- 1.1.1 Section Includes:
- .1 The installation of drainage waste and vent piping.
 - 1.1.2 Sustainable requirements for construction and verification.
- 1.2 **References**
- 1.2.1 Canadian Standards Association (CSA International).
- .1 CSA B67-1972(R1996), Lead Service Pipe, Waste Pipe, Traps, Bends and Accessories.
 - .2 CAN/CSA-B70, Cast Iron Soil Pipe, Fittings and Means of Joining.
 - .3 CAN/CSA-B125, Plumbing Fittings.
- 1.3 **Quality Assurance**
- 1.3.1 Health and Safety:
- .1 Do construction occupational health and safety in accordance with Section 01 35 30 - Health and Safety Requirements.
- 2 **PRODUCTS**
- 2.1 **Pipes**
- 2.1.1 Above Ground Piping
- .1 Cast iron pipes 27.6 mPa CSA B-70 pipes in exposed location or in accessible pipe chases: cast iron body with straight threaded, coated plug having a tapered shoulder that seats against a lead seal. Use same pipes for suspended drainage in crawl space.
 - .2 Copper stack piping in exposed locations or in accessible pipe chases: Bronze cleanout tee, bronze ferrule and cover, secured to ferrule by bronze cap screws.
 - .3 Access cover for cleanouts: type to suit wall/ceiling surface and construction.
 - .4 Cover for cleanouts at base of vertical sanitary stacks or rainwater leaders: bolted type, neoprene gasket, and brass cap screws or bolt studs, unless shown otherwise on Drawings.
 - .5 Vent pipe shall be galvanized steel Schedule 40 ASTM #A53 with 1035 kpa, galvanized malleable fittings or copper DWV pipe with solder fittings.
- 2.1.2 Buried Pipes
- .1 Buried pipes laid on approved bedding DWV plastic PVC solvent weld gravity sewer pipes, CSA B182.1SDR28 to 150mm size and SDR35 to larger size.
- 2.1.3 Insulation
- .1 25mm thick, vapour barrier, fire retardant in compliance to Ontario Building Code.

3 EXECUTION**3.1 Installation**

- 3.1.1 Install in accordance with Ontario Plumbing Code and local authority having jurisdiction and pipe to Manufacturer's direction.
- 3.1.2 Vent line thru their roof shall have very minimum penetrations and minimum of 75mm size extended 450mm above roof.
- 3.1.3 Provide vent line to each fixture and trap in accordance with OBC requirement and connect to existing mains.
- 3.1.4 Provide sanitary line to each fixture and connect to building sanitary line and connect to existing mains.
- 3.1.5 Pressure test each line and to suit OBC Compliance.
- 3.1.6 Ensure accessible and that access doors are correctly located.
- 3.1.7 Ensure that fixtures are properly connected to system and effectively vented.
- 3.1.8 Affix applicable label (sanitary, vent) complete with directional at every 3m interval.
- 3.1.9 Verify location of existing services and route of new pipes thru building. For any discrepancy report to Consultant prior to five working days of proposal closing.
- 3.1.10 Insulate all unburied drain lines with 25mm thick insulation.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Summary**
- 1.1.1 Section Includes
- .1 Labour, Products, equipment and services necessary to complete the Work of this Section.
- 1.2 **Submittals**
- 1.2.1 Shop Drawings
- .1 Submit Shop Drawings in accordance with Section 01 30 00, Instructions to All Trades.
- 1.3 **Reference Standards**
- 1.3.1 CAN/CSA B64 Standard series.
- 1.3.2 Ontario Building Code.
- 2 **PRODUCTS**
- 2.1 **Miscellaneous Equipment**
- 2.1.1 Shock Absorbers
- .1 Water hammer arrestor, sized in accordance with P.D.I.-WH201. Products from the following manufacturers are acceptable.
- .1 Watts.
- .2 Zurn Shoktrol.
- .3 PPP Inc.
- .4 Approved Alternate.
- 2.2 **Floor Drains / Funnel Floor Drains**
- 2.2.1 Replace covers of existing floor drains and funnel floor drains to suit new epoxy / seamless flooring.
- 2.2.2 Floor Drains: All new floor / funnel floor drains shall match existing unit and comply to CSA B79. Trap and vent each unit as per Code.
- 2.2.3 Cast iron body adjustable head, nickel bronze strainer, integral seepage pan, and clamping collar.
- 2.2.4 Combination funnel floor drain; cast iron body with integral seepage pan, clamping collar, nickel-bronze adjustable head strainer with integral funnel.
- 2.2.5 For epoxy floor provide surface clamping device for each unit.
- 2.3 **Cleanouts**
- 2.3.1 Replace covers of existing cleanouts with clamping device new to suit new epoxy / seamless floor.
- 2.3.2 Cleanout Plugs: heavy cast iron male ferrule with brass screws and threaded brass or bronze secondary plug. Sealing-caulked lead seat or neoprene gasket.
- 2.3.3 Access Covers:
- .1 Floor Access: round, cast iron body and frame with adjustable secured nickel bronze top, cast box with anchor lugs and with clamping device to suit epoxy / seamless floor.

.2 Plugs: bolted bronze with neoprene gasket.

2.4 **Trap Seal Primers**

2.4.1 Brass, with integral vacuum breaker, NPS1/2 solder ends, NPS1/2 drip line connection.

3 **EXECUTION**

3.1 **Manufacturer's Instructions**

3.1.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

3.2 **Installation**

3.2.1 Install in accordance with provincial codes, and local authority having jurisdiction.

3.2.2 Install in accordance with manufacturer's instructions and as specified.

3.3 **Cleanouts**

3.3.1 Bring cleanouts to finished floor.

3.3.2 Building drain cleanout and stack base cleanouts: line size to maximum NPS4.

3.4 **Water Hammer Arrestors**

3.4.1 Install on branch supplies to fixtures or group of fixtures in accordance with Manufacturer's direction.

3.5 **Trap Seal Primers**

3.5.1 Install for floor / funnel drains and each trap.

3.5.2 Install on cold water supply to nearest frequently used plumbing fixture, in concealed space, to approval.

3.5.3 Install soft copper tubing to floor drain.

3.6 **Shock Absorbers**

3.6.1 Locate shock absorbers in hot and cold water lines:

.1 At far ends of mains

.2 At dead ends of branch piping or to groups of plumbing fixtures

.3 At isolated individual plumbing fixtures

3.7 **Testing And Adjusting**

3.7.1 General:

.1 In accordance with General Requirements, supplemented as specified.

3.7.2 Timing:

.1 After start-up deficiencies rectified.

.2 After certificate of completion has been issued by authority having jurisdiction.

3.7.3 Adjustments:

-
- .1 Verify that flow rate and pressure meet required criteria.
 - .2 Make adjustments while flow rate.
 - 3.7.4 Floor drains:
 - .1 Verify operation of trap seal primer.
 - .2 Prime, using trap primer. Adjust flow rate to suit site conditions.
 - .3 Check operations of flushing features.
 - .4 Check security, accessibility, removability of strainer.
 - .5 Clean out baskets.
 - .6 Provide prime line and vent line to each floor drain trap.
 - 3.7.5 Cleanouts:
 - .1 Verify covers are gas-tight, secure, yet readily removable.
 - 3.7.6 Water hammer arrestors:
 - .1 Verify proper installation of correct type of water hammer arrester.
 - 3.7.7 Training:
 - .1 Training of O&M Personnel, supplemented as specified.
 - .2 Demonstrate full compliance with Design Criteria.
 - 3.8 **Floor / Floor Drains**
 - 3.8.1 Install to Manufacturer's direction in compliance to Code.
 - 3.8.2 Provide trap, vent and prime line to each unit.

END OF SECTION

- 1 **GENERAL**
- 1.1 **Summary**
- 1.1.1 Section Includes:
- .1 Labour, Products, equipment and services necessary to complete the Work of this Section.
- 1.2 **Submittals**
- 1.2.1 Shop Drawings
- .1 Submit Shop Drawings in accordance with Section 01 30 00, Instructions to All Trades.
- 2 **PRODUCTS**
- 2.1 **Materials**
- 2.1.1 Materials shall be new, of Canadian manufacture and of best quality of their respective kinds and of uniform pattern throughout.
- 2.1.2 Traps and fittings shall be of same material and equal in quality and thickness to soil, vent, waste and drain piping to which attached.
- 2.2 **Valves**
- 2.2.1 Water valves shall be of Crane, Jenkins or Toyo (Industrial Class) manufacture, all-brass solder joint.
- 2.2.2 Shut-off valves on branch lines to room fixtures and equipment up to and including 50mm size may be brass ball valves rated for 4137kPa WWP.
- 2.3 **Water Hammer Arrestors**
- 2.3.1 Water hammer arrestors shall be PPP In. or equal, sized and installed as per Manufacturer's recommendations. Provide unit in accordance with the following schedule:
- | <u>Model</u> | <u>Fixture Unit</u> |
|--------------|---------------------|
| SC-500 | Up to 11 |
- 2.4 **Plumbing Fixtures**
- 2.4.1 General Requirements:
- .1 CSA approved, of make, type and size specified herein.
- .2 Plumbing supplies and fixture trim material to be of CSA approved plumbing brass with chrome plated finish, and of make and type specified.
- .1 Each item to bear name of manufacturer or identifying trademark.
- .3 Provide plumbing fixtures shown or noted complete with necessary fittings and escutcheons. Plastic escutcheons are not acceptable. Fixtures and fittings shall conform to C.S.A. B45.1, B45.4 and B125 amended to date.
- .4 **Sink S-1 - Two Compartment**

Franke UCD6408, undermount, two compartment sink, P-Trap, stops on supply pipes and Delta 100LF-HDF faucet. Provide in Sink Aerator Model C1300 CSA approved water storage electric heater 1300 watts, 115 volt with power cord and F-HC3300C hot water dispenser faucet.

.5 Sink S-2

Franke WHB-1617 with Delta 100LF-HDF faucet, P-trap, stops on supply pipes, floor support chair carrier. Provide Axion eye pod faucet mount eyewash with thermostatic shutoff set.

.6 Dishwasher (DW)

Supplied by Another Section installed by this Section. Rough-in and connect up domestic dishwasher supplied by Agency where shown. Provide 50mm for commercial and 38mm for domestic, trapped waste, 38 or 32mm vent, 13mm stops, and W-5 Shockstop on each supply.

3 **EXECUTION**

3.1 **Installation**

- 3.1.1 Adjust to provide specified water flow rate based on manufacturer/s calibration data for valve open vs. inlet water pressure.
- 3.1.2 Install each fixture to Manufacturer's directions. Provide all accessories as required.
- 3.1.3 Provide trap and vent line to each fixture.
- 3.1.4 Run all services concealed in wall. Do not run any exposed pipes.
- 3.1.5 Verify each fixture with millwork provided by another Section. No extra will be allowed if revisions are required due to millwork provided by another Section.
- 3.1.6 In addition to tests required by local authorities, test new piping and drains in presence of Consultant as hereinafter described.
- 3.1.7 Vent fixtures and traps according to Plumbing Code and local regulations. Connect new vent to existing lines where suitable or provide new vent lines and terminate on roof. Increase vents smaller than 75mm diameter to 75mm before same pass through roof.
- 3.1.8 Make all joints in piping to conform to Plumbing Code and to approval.
- 3.1.9 Verify location of existing services and routes of new pipes before proposal submission.

END OF SECTION

SHERIDAN VILLA LONG TERM CARE (Scope 7)**1 GENERAL****1.1 General**

- 1.1.1 Conform to Sections of Division 1 as applicable.
- 1.1.2 Conform to Mechanical General Requirements - Section 21 05 01 as applicable.

1.2 Submittals

- 1.2.1 Submit Shop Drawings in accordance with Section 01 30 00, Instructions to All Trades.
- 1.2.2 Indicate design, construction and relevant details of sealant, tape and propriety joints.

2 PRODUCTS**2.1 Sheet Metal Work - General**

- 2.1.1 Furnish sheet metal work in accordance with material Specifications and construction details specified herein, and conforming to standard and recommended practices as defined by SMACNA Duct Construction Standards.
- 2.1.2 Furnish all ductwork constructed to SMACNA 2" w.g. pressure classification, unless noted otherwise on Drawings.
- 2.1.3 Furnish ductwork of galvanized steel sheet with Z-275 (G90) or ZF075 (A25) designation zinc coating to ASTM A653/A653M.
- 2.1.4 Furnish ducts of sizes shown on Drawings. For acoustically lined ducts, adjust duct size to accommodate liner thickness, with clear inside dimensions as shown on Drawings.
- 2.1.5 Fabricate ductwork free from vibration, rattle or drumming under operating conditions. Furnish necessary reinforcements, bracing, framing, gasketing, etc. to comply with performance criteria.
- 2.1.6 Continuously solder or seal joints in exterior air intake duct to prevent dripping of moisture through joints. Furnish 38mm drain flange in low point of such ductwork.
- 2.1.7 Furnish sleeves at duct penetrations through walls and floors, fabricated from same material and thickness sheet material as for ductwork. Furnish closure plates each side of wall to cover sleeve.
- 2.1.8 Furnish flanged joints and gaskets of neoprene or other resilient non-flammable for duct connections to AC units, coils, etc. Fabricate flanges from mild steel angles to match equipment flanges.
- 2.1.9 Furnish screens of 13mm mesh x 2.7mm diameter galvanized wire for air intakes, exhausts and open ends of ductwork.
- 2.1.10 Rectangular Ductwork Type I - Low Pressure - Medium Pressure
 - .1 Fabricate rectangular ductwork to metal thickness and construction methods as specified herein for various size ranges of ducts. Given dimensions represent widest side of duct.

Galvanized Steel Gauges and Equivalent Thicknesses

Gauge (gsg)	mm	Low Pressure (mm)	Medium Pressure (mm)	Slip
26	0.49	Up to 300		
24	0.64	330 - 762	Up to 457	Up to 762
22	0.84	787 - 1372	483-1219	787-1524
20	0.94	1397-2134	1245-1829	1549 & over
18	1.24	2134 and over	1854 and over	

2.1.11 Supports and Hangers - Rectangular Ductwork

- .1 Except where shown otherwise on Drawings, Furnish strap hangers of 3mm x 25mm mild steel bar stock for ducts up through 760mm width. Bend strap hanger around bottom of duct for a minimum of 38mm and attach to sides and bottom of duct. Furnish mild steel rod hangers of 10mm dia. minimum size for ducts over 760mm in width and furnish 38mm x 38mm x 3mm steel angle across bottom of duct and attach hanger to angle (not the duct).

- 2.1.12 Provide where shown, flexible air duct hoses. Secure hose to metal ducts with attachment screws and band clamps and tape seal with Permascreen fiberglass duct tape. Minimum length 25% longer than measured distance. Maximum length 50% more than measured length (max. 2m). Provide manual balancing damper in trunk duct at connection to each flexible duct. Balancing dampers shall be opposed blades TAMCO 1000, Ruskin or E.H. Price c/w access door. Provide TAMCO 1000 dampers on all fresh air branch ducts connected to heat pumps or supplied to Classrooms.

- 2.1.13 Sound jacketing: Provide Barymat BM-1C noise control composite around supply and return ducts from the equipment and all the way to the point the duct leaves or enters the Mechanical Room.

2.2 **Seal Classification**

2.2.1 Classification as follows:

Maximum Pressure Pa	SMACNA Seal Class
500	C
250	C
125	C

2.2.2 Seal classification:

- .1 Class A: longitudinal seams, transverse joints, duct wall penetrations and connections made airtight with sealant and tape.
- .2 Class B: longitudinal seams, transverse joints and connections made airtight with sealant.
- .3 Class C: transverse joints and connections made air tight with sealant.
- .4 Unsealed seams and joints.

2.3 **Sealant**

- 2.3.1 Sealant: oil resistant, water borne, polymer type flame resistant duct

sealant. Temperature range of minus 30 degrees Celsius to plus 93 degrees Celsius.

2.4 **Tape**

2.4.1 Tape: polyvinyl treated, open weave fiberglass tape, 50mm wide.

2.5 **Duct Leakage**

2.5.1 In accordance with SMACNA HVAC Air Duct Leakage Test Manual.

2.6 **Fittings**

2.6.1 Fabrication: to SMACNA.

2.6.2 Radiused elbows.

.1 Rectangular: standard radius short radius with single thickness turning vanes Centreline radius: 1.5 times width of duct.

.2 Round: smooth radius five piece. Centreline radius: 1.5 times diameter.

2.6.3 Mitred elbows, rectangular:

.1 To 400mm: with single double thickness turning vanes.

.2 Over 400mm: with double thickness turning vanes.

2.6.4 Branches:

.1 Rectangular main and branch: with radius on branch 1.5 times width of duct 45 degrees entry on branch.

.2 Round main and branch: enter main duct at 45 degrees with conical connection.

.3 Provide volume control damper in branch duct near connection to main duct.

.4 Main duct branches: with splitter damper.

2.6.5 Transitions:

.1 Diverging: 20 degrees maximum included angle.

.2 Converging: 30 degrees maximum included angle.

2.6.6 Offsets:

.1 Full short radiused elbows as indicated.

2.6.7 Obstruction deflectors: maintain full cross-sectional area.

.1 Maximum included angles: as for transitions.

2.7 **Fire Stopping**

2.7.1 Retaining angles around duct, on both sides of fire separation in accordance with Section 07 84 00 - Firestopping.

2.7.2 Fire stopping material and installation must not distort duct.

2.8 **Galvanized Steel**

2.8.1 Lock forming quality: to ASTM A653/A653M, Z90 zinc coating.

2.8.2 Thickness, fabrication and reinforcement: to SMACNA.

2.8.3 Joints: to SMACNA proprietary manufactured duct joint. Proprietary manufactured flanged duct joint to be considered to be a class A seal.

3 EXECUTION**3.1 Installation - General**

- 3.1.1 Refer to and comply with applicable requirements specified in Section 21 05 01, Mechanical General Requirements.
- 3.1.2 Install miscellaneous steel framing, supports, braces, etc. as may be required to hang or support ductwork as specified herein, and as shown on Drawings.
- 3.1.3 Install ductwork in arrangement shown on Drawings in accordance with standards and recommended practices off ASHRAE and SMACNA. Provide required offsets and transitions, whether specifically indicated or not, to facilitate duct arrangement and to avoid interference with building structure, piping, equipment and services.
- 3.1.4 Install ductwork in locations and at elevations appropriate to ceiling height shown on Drawings. Where required to be concealed, install ductwork in furred spaces provided in walls and ceilings. Where there is no provision for concealed ductwork, install as close as possible to walls, partitions and overhead structures to attain maximum headroom and clearance.
- 3.1.5 Install sleeves where ducts pass through walls or floors. Pack space between duct and sleeve with mineral wool and seal both ends with non-inflammable fire resistant sealing compound. Install sheet metal closure plates on each side of wall to cover sleeve.
- 3.1.6 At air intakes, exhausts and open ends in ductwork install removable galvanized screens securely fastened in place.
- 3.1.7 Install gasketed flanged joints at duct connections to air conditioning units, coils, etc.
- 3.1.8 Install beam clamps or supplementary steel to secure hanger rods, angles and straps to structural steel framing.
- 3.1.9 Where shape of duct changes, install transition piece so that angle of side of transition piece does not exceed 15 degrees from straight run of duct being connected, unless shown otherwise on Drawings.
- 3.1.10 In office areas paint interior of ductwork for at least 600mm behind supply and exhaust grilles with matte black paint so as to render ductwork invisible from occupied space.
- 3.1.11 In areas having high humidity, slope exhaust ductwork up away from register and without seams in bottom of duct for at least 3m of duct run behind register.
- 3.1.12 Slope fresh air intake ducts down at 1:100 to permit moisture induced by air intake to be drained. Install 38mm drain flange in bottom of duct at low point and run drain line to nearest floor drain or as noted on Drawings.

3.2 Supports and Hangers – Rectangular Ductwork

- 3.2.1 Install supports and hangers at intervals not over 2400mm centres for ducts up to 1500mm in width and at 1200mm centres for ducts 1500mm in width and over.
- 3.2.2 Install miscellaneous steel angles or channels as required between joists or building steel for structural support of duct where building

framing spacing does not coincide with the required hanger spacing.

3.3 **Cleaning and Testing of Ductwork**

- 3.3.1 Inspect and test ductwork for air leakage at joints and connections to equipment, under normal operating conditions. Provide systems leakage tests to SMACNA Class 12 requirements.
- 3.3.2 Test ductwork before ducts are insulated, painted or concealed.
- 3.3.3 Immediately correct defects discovered during tests and retest systems to complete satisfaction of Engineer.
- 3.3.4 Prior to start-up of fans, blow out complete systems of ductwork with high velocity air for not less than two hours using where possible the installed air handling equipment to full capacity and by blanking off duct sections to achieve required velocity. Do not install air filters prior to blow- out of ductwork systems. Use auxiliary portable blowers for cleaning where installed fan systems are not adequate to blow out complete system free from dust and dirt.
- 3.3.5 After duct systems have been blown out, clean register, grille or diffuser outlet collars with industrial type vacuum cleaner. On completion of cleaning process, install filters before placing systems in final operation.

3.4 **Sealing and Taping**

- 3.4.1 Apply sealant to outside of joint to manufacturer's recommendations.
- 3.4.2 Bed tape in sealant and recoat with minimum of one coat of sealant to manufacturers recommendations.

3.5 **Leakage Tests**

- 3.5.1 In accordance with SMACNA HVAC Duct Leakage Test Manual and SMACNA Class 12.
- 3.5.2 Do leakage tests in sections.
- 3.5.3 Make trial leakage tests as instructed to demonstrate workmanship.
- 3.5.4 Do not install additional ductwork until trial test has been passed.
- 3.5.5 Test section minimum of 30m long with not less than three branch takeoffs and two 90 degrees elbows.
- 3.5.6 Complete test before performance insulation or concealment Work.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **General**
- 1.1.1 Conform to Section 21 05 01, Mechanical General Requirements.
- 1.2 **Summary**
- 1.2.1 Section Includes:
- .1 Metallic insulated.
 - .2 Materials and installation of flexible ductwork, joints and accessories.
- 1.3 **Submittals**
- 1.3.1 Make submittals in accordance with Section 01 30 00, Instructions to All Trades.
- .1 Product Data: submit WHMIS MSDS for the following:
 - .1 Thermal properties.
 - .2 Friction loss.
 - .3 Acoustical loss.
 - .4 Leakage.
 - .5 Fire rating.
 - .2 Samples: submit samples with product data of different types of flexible duct being used in accordance with Section 01 30 00 – Instructions to All Trades.
- 2 **PRODUCTS**
- 2.1 **Metallic - Insulated**
- 2.1.1 Spiral wound flexible aluminum with factory applied, 37mm thick flexible glass fibre thermal insulation with vapour barrier and vinyl jacket, as indicated.
- 2.1.2 Performance:
- 1. Factory tested to 2.5 kPa without leakage.
 - 2. Maximum relative pressure drop coefficient: 3.
- 3 **EXECUTION**
- 3.1 **Duct Installation**
- 3.1.1 Install in accordance with: SMACNA.
- 3.1.2 Maximum length of flexible duct shall be 4 m.

END OF SECTION

SHERIDAN VILLA LONG TERM CARE (Scope 7)**1 GENERAL****1.1 General**

- 1.1.1 Conform to Sections of Division 1 as applicable.
- 1.1.2 Conform to Section 21 05 01, Mechanical General Requirements.

1.2 Related Sections

- 1.2.1 Painting: Section 09 90 00, Painting and Finishing.
- 1.2.2 Ductwork: Section 23 31 14.

1.3 Submittals

- 1.3.1 Shop Drawings: Prepare and submit Shop Drawings for all equipment and systems covered by this Section.
- 1.3.2 Record Drawings
 - .1 Record, as Work progresses, on one set of white prints provided, all changes or deviations in location of ductwork, dampers, terminal equipment, and equipment and such other approved changes that occur during the progress of the Work.
 - .2 Provide at completion of Work, one final set of Drawings with all changes correctly marked in red ink.
- 1.3.3 Operational and Maintenance Data: Provide equipment literature, operating instructions, maintenance instructions, parts lists, and other pertinent data for all equipment and systems covered by this Section.

2 PRODUCTS**2.1 Grilles**

- 2.1.1 General:
 - .1 Refer to Drawings for neck size, dimensions, capacity, etc. of grilles, registers and diffusers.
 - .2 Catalogue numbers of first named supplier are listed in schedules on Drawings to show required type and style.
 - .3 Furnish supply diffusers and registers to deliver indicated air quantities shown with throw to reach intended space limits without increasing sound level of room. Furnish blank-off baffles where required. Furnish equalizing deflectors on diffusers and in other locations as shown or required.
 - .4 Coordinate placing of diffusers, registers and grilles in ceilings with electrical and ceiling installation trades and exact location to final approval of Engineer.
- 2.1.2 Grilles:
 - .1 Grilles shall be of aluminum construction (except where noted) with baked white enamel finish, except in walls where prime coat finish shall be supplied. Aluminum frames and bars shall be extruded from hard stock, free from pits and spots. Joints shall be 'hairline'. Attachment shall be with stainless steel or C.P. screws with 6mm thick urethane foam gasket set under flange.

Regional Municipality of Peel
Purchasing Division

Document 2020-546P
**LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL**

**Specifications
Section 23 37 13
Grilles**

- .2 Exhaust air grilles, except where otherwise noted, shall be #530D/F/S/A/B12, with removable key operated volume damper.
- .3 Perforated GWB shall be used for return air. See Architectural Specifications.

2.1.3 Acceptable Equipment

- .1 E.H. Price
- .2 Carnes
- .3 Titus
- .4 AirVector
- .5 Krueger

3 EXECUTION

3.1 Installation

- 3.1.1 Refer to and comply with applicable requirements specified in Section 21 05 01, Mechanical General Requirements.
- 3.1.2 Install miscellaneous steel framing, supports, braces, etc. as may be required to hang or support equipment and ductwork as specified herein, and as shown on Drawings.
- 3.1.3 Install beam clamps or supplementary steel to secure hanger rods, angles and straps to structural steel framing.
- 3.1.4 In suspended ceiling areas, adjust final location of grilles and diffusers to suit reflected ceiling plan.

END OF SECTION

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- 1 **GENERAL**
- 1.1 **Related Instructions**
- 1.1.1 Division 1, General Requirements is part of this Section and shall apply as if repeated here.
- 1.1.2 Unless specified otherwise, this Section shall apply to all Sections of Division 26.
- 1.1.3 Conform to the conditions stated in the Contract Form and Supplementary Conditions.
- 1.1.4 This section of specification is an integral part of the Contract Documents and shall be read accordingly.
- 1.2 **Intent**
- 1.2.1 Mention herein or indication on Drawings of articles, materials, operations or methods requires: supply of each item mentioned or indicated, of quality, or subject to qualifications noted; installation according to conditions stated and; performance of each operation prescribed with furnishing of necessary labour, equipment, tools, instruments, services and incidentals for Electrical Work, Division 26.
- 1.2.2 Sections of these Electrical Specifications are not intended to delegate functions nor to delegate work and supply to any specific trade and the Work shall include all labour, materials, equipment, tools and inspection required for a complete and working installation as described.
- 1.2.3 The Specifications are integral with the Drawings which accompany them. Neither is to be used alone. Any item or subject omitted from one, but included in the other is properly specified.
- 1.2.4 Wherever differences occur in the Contract Documents, the maximum conditions will govern and be allowed for in the Proposal price. The item to be incorporated will be at the option of the Consultant.
- 1.3 **Definitions**
- 1.3.1 Where used, words "Section" and "Division" shall also include other Subcontractors engaged on site to perform Work to make building and site complete in all respects.
- 1.3.2 Where used, the word "products" shall mean the material, equipment, component, machinery, or fixtures forming the completed Work.
- 1.3.3 Where used, word "connect" shall mean to supply and install all wiring and raceways and make all power connections to products.
- 1.3.4 Where used, word "supply" shall mean to include all labour, materials and services to furnish to site in location required or directed complete with accessory parts, but is not intended to include installation.
- 1.3.5 Where used, word "install" shall mean to include all labour, materials and services to secure in place products, including receiving, unloading, transporting, storage, uncrating, installing, connecting

and performance of such testing and finish work as is compatible with degree of installation specified complete ready for use.

- 1.3.6 Where used, word "provide" shall mean to supply and install as each is described above.
- 1.3.7 Where used, word "commission" shall mean to startup and initial operation of products as required to demonstrate satisfactory operation of products and entire system including calibration of any instrumentation.
- 1.3.8 Where used, word "Work" shall mean the total construction required by the Contract Documents and includes all labour, products and services.
- 1.3.9 Where used, wordings such as "approved, to approval, as directed, permitted, permission, accepted, acceptance, report to", shall mean "approved, directed, permitted, accepted, report to", by the Consultant.
- 1.4 **By-Laws And Regulations**
- 1.4.1 Conform to latest Government, Provincial and Municipal By-laws, regulations, Codes and Standards and requirements of other authorities having jurisdiction in the area where work is to be performed. Minor changes required by an authority having jurisdiction shall be carried out without change to the Contract amount. Standards established by Drawings and Specifications shall not be reduced by applicable codes or regulations.
- 1.4.2 Conform to the following applicable standards and regulations as minimum, but not limited to:
- .1 Canadian Standards Association (CSA) Standards
 - .2 Underwriter's Laboratories of Canada (ULC) Standards
 - .3 Ontario Electrical Safety Code (OESC) and Bulletins
 - .4 Electrical Safety Authority (ESA) Requirements
 - .5 Canadian Underwriters Association (CUA) Standards
 - .6 Ontario Building Code (OBC)
 - .7 National Fire Protection Association (NFPA) Standards
 - .8 National Electrical Manufacturers Association (NEMA) Standards
- 1.4.3 Electrical and Electronic Manufacturers Association of Canada (EEMAC) Standards
- 1.5 **Permits And Fees**
- 1.5.1 The building permit will be obtained by the Consultant and will be provided to the Contractor. Apply for, obtain, and pay for any other permits, licenses, certificates, connection charges and inspections required by Authorities having jurisdiction. Include any premiums applicable due to requirements for after office hours inspections.
- 1.5.2 The first submission of plans and specifications to ESA will be made by the Consultant. From then on, the Contractor shall be responsible for obtaining and complying with all the requirements of ESA.
- 1.5.3 Submit all required documentation to the Authorities for their approval and comments before starting any Work. Provide all

additional Drawings, details or information as may be required. Comply with any changes requested by authorities as part of the Contract, but notify the consultant immediately of such changes.

1.6 **Examination Of Site And Conditions**

- 1.6.1 Examine the site and local conditions.
- 1.6.2 Examine carefully all Drawings and complete Specifications to ensure that work and equipment will satisfy conditions and performance requirements as shown.
- 1.6.3 Examine the Work of other Sub-contractors and report at once any defect or interference affecting the Work, its completion or warranty.
- 1.6.4 No allowance will be made later for any expense incurred through failure to make these examinations or to report any such discrepancies and omissions in writing, five working days prior to proposal closing.
- 1.6.5 Submission of a Proposal confirms that the Contract Documents and site conditions are completely understood and accepted without qualifications unless exceptions are specifically noted in the Proposal.

1.7 **Contract Documents**

- 1.7.1 The Contract Drawings of this Division are performance Drawings and indicate the scope and general arrangement of the Work. They are diagrammatic except where specific details are given.
- 1.7.2 They shall be read in conjunction with Architectural, Structural, Mechanical and all other Division Drawings of the Contract.
- 1.7.3 The Drawings do not show all conduits and/or wiring or all Structural, Mechanical and Architectural details.
- 1.7.4 Obtain accurate dimensions from the Architectural Drawings, or by site measurement. Locations and elevations of services are approximate and must be verified before construction is undertaken.
- 1.7.5 Make changes required to accommodate structural conditions, (beams, columns caps, etc.). Obtain the Consultant's approval before proceeding.
- 1.7.6 Adjust the location of materials and/or equipment up to three (3) meters in any direction as instructed without adjustment to Contract price, provided that the instructions are given before installation and rough-in.
- 1.7.7 Plan and install conduit runs respecting all applicable conditions including Structural, Mechanical and Architectural details.

1.8 **Shop Drawings**

- 1.8.1 Prepare and submit Shop Drawings of all Products in accordance with Division 1-General requirements as specified herein and in each section of Division 26.
- 1.8.2 Submit electronic copies of Shop Drawings unless otherwise noted. Shop Drawings shall have a minimum 210mm x 285mm clear space on the front sheet, suitable for stamping. The cover sheet shall include the project name, Division 26 name and product description.

- Where multiple equipment is submitted under one binding, include an index of all equipment as the front sheet.
- 1.8.3 Assume full responsibility for submission of Shop Drawings. Allow minimum two (2) weeks for Consultant's review.
- 1.8.4 The Consultant will only review Shop Drawings bearing the Division 26 and Contractor's stamps of approval.
- 1.8.5 Submit Shop Drawings showing the following:
- .1 Project name
 - .2 Project tag number
 - .3 Manufacturer's name and model number
 - .4 Supplier's name
 - .5 Approval agencies
 - .6 Shipping and working weight
 - .7 Performance characteristics
 - .8 Dimensions, including required clearances
 - .9 Electrical characteristics
 - .10 Bill of materials and finishes
 - .11 Time required to fabricate and deliver
 - .12 All variations from Proposal Documents
 - .13 Construction and field connection details
 - .14 Installation requirements
- 1.8.6 The Consultant's review shall not relieve this Division of responsibility to provide Products in accordance with the design intent and Contract Documents.
- 1.8.7 Manufacturer's printed data sheets for standard items are acceptable providing pertinent characteristics are identified and relate to specified items.
- 1.8.8 Each Shop Drawing shall be checked and stamped as being correct, by trade purchasing item, and by Contractor, before Drawing is submitted.
- 1.8.9 Where applicable, provide wiring details, schematics, single line Drawings, and wiring diagrams showing interconnection with work of other Trades.
- 1.8.10 Verify and check dimensions to ensure proper installation of equipment in available space and without interference to work of other trades. Ensure that electrical and all other coordination is complete prior to submission of Shop Drawings.
- 1.8.11 Provide data sheets and samples for all wiring devices and wall plates prior to installation. Device and plate colors/finishes to be confirmed prior to ordering.
- 1.8.12 Where requested, submit samples of Products for review and approval.
- 1.8.13 Do not have equipment delivered to site until a Shop Drawing for the item has been reviewed.
- 1.9 **Interference And Detail Drawings**
- 1.9.1 Prepare Interference Drawings in conjunction with all parties and trades concerned showing sleeves and openings and passage of piping and conduits through building structure. Drawings shall also

- show inserts, curbs, equipment bases, anchors, special hangers and weights on all load points.
- 1.9.2 Prepare fully dimensioned detail Drawings of products and services in electrical rooms, service and ceiling spaces, and all other critical locations. Co-ordinate the Work with all other Divisions. Base Drawings on reviewed Shop Drawings and indicate all details pertaining to access, clearances, sleeves, electrical connections, and elevations of pipes, ducts and conduits. Include location of access doors provided under this Division.
- 1.9.3 Ensure that clearances required by jurisdictional authorities are indicated on the Interference Drawings. The Agency will not consider any extra cost as a result of the Contractor's failure to prepare proper interference Drawings.
- 1.10 **Record Drawings**
- 1.10.1 Conform to General Requirements. Maintain at least two (2) sets of Documents and clearly mark on same as job progresses, changes and deviations from work shown so that on completion Agency will have records of exact location of ducts and equipment and record of material and equipment changes.
- 1.10.2 Contractor shall obtain clean set of prints from Consultant at start of Contract Work and shall keep these prints up-to-date at jobsite, accurately recording all changes made on project and locating all services, equipment, etc. which may have been shown only diagrammatically on Contract Documents.
- 1.10.3 Contractor shall ensure that as-built information is accurately recorded and shall check same. As-Built Drawings shall be reviewed with Consultant at each jobsite meeting.
- 1.10.4 Upon completion of Contract Work, prior to Substantial Performance inspection and after final review with Consultants, Contractor shall issue to the Consultant for review the actual on site As-Built Drawings. Upon acceptance Contractor shall neatly transfer recorded information and make final As-Built submission to Consultant for review in the following form:
- .1 One (1) set of clean, legible prints.
 - .2 One (1) ACAD 2019 format Drawings. Files shall retain all setting (layers, line types, scales colors, etc) as used in the Drawing files (produced) by Consultant.
- 1.10.5 After Record Drawings have been reviewed, revised if necessary until acceptable to the consultant. Deliver Drawings in the form of CD (CAD + PDF) and three (3) sets of prints taken from that CD to Agency.
- 1.11 **Operation And Maintenance Manual**
- 1.11.1 Contractor will be responsible for collecting and organizing three (3) copies of all data, operating instructions, maintenance and trouble-shooting instructions, parts lists, parts diagrams, evidence of all tests and certifications, complete reviewed Shop Drawings, etc. and assembling them in neat manuals in hard cover. Identify cover

“Operation and Maintenance Manual for NAME OF THE PROJECT”. Manuals shall be separated with dividers in logical sections and volumes.

- 1.11.2 Contractor shall also collect from trades and Suppliers all Guarantees/Warranties specified. Check that starting date (date of Substantial Performance of entire project) and extent of each guarantee/warranty are clearly indicated. Check also that all guarantees/warranties indicate Supplier’s Name or Subcontractor’s Name as appropriate together with contact phone number. Assemble neatly in labeled section of each manual.
- 1.11.3 Prior to requesting Substantial Performing inspection, submit one (1) copy to Consultant for review. Make all corrections requested by Consultant and forward the corrected two (2) copies to the Agency.
- 1.12 **Scheduling**
- 1.12.1 Comply with the construction schedule. Conform to phasing of Work if applicable. Conform to interim and final completion dates.
- 1.12.2 Coordinate electrical schedule with general construction schedule.
- 1.12.3 Submit a bar chart schedule showing the start and completion dates for each activity based on a critical path analysis of the Work.
- 1.12.4 Include in schedule for electrical Work done by others, e.g. Power Supply Authority connection.
- 1.13 **Alternates And Substitutions**
- 1.13.1 Specified and acceptable products shall be accounted for in the bid price. No substitute requests will be considered prior to award of the Contract. Substitution Products will only be considered when proposed Products become unobtainable. State in proposal the proposed substitute and amount added or deducted.
- 1.13.2 It is the responsibility of this Division to ensure "Substitute Products" fits space allotted and gives performance specified.
- 1.13.3 If Products manufactured and/or specified by a manufacturer named as equivalent are used in lieu of the manufacturer specified, be responsible for ensuring that the substituted Product is equivalent in performance and operating characteristics to the specified Product, and, it shall be understood that all costs for additional space, larger power feeders and changes to associated or adjacent Work will be borne by the Sub-contractor offering the substitution. In addition, in Equipment Rooms where Products named as equivalent is used in lieu of specified Products and the dimensions of such Products differs from the specified Products, prepare and submit for approval, accurately dimensioned layouts of rooms affected.
- 1.13.4 Contractor shall pay the Consultant on a per diem basis (hourly) for the review of the alternate Products for cost saving purpose.
- 1.14 **Valuation Of Changes**
- 1.14.1 For each change submit a complete itemized breakdown of labour and material.

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- 1.14.2 Only the net difference between an extra and a credit will be subject to overhead and profit mark-up.
- 1.14.3 Material shall be valued at current trade prices incorporating all discounts and labour rates. Overhead and profit shall be as shown in the Proposal Form.
- 1.15 **Workmanship**
- 1.15.1 Workmanship and method of installation shall conform to best standards and practice and be performed to approval. Work shall be done by tradesmen skilled in Work to be performed. Where required by local or other By-Laws and Regulations, tradesmen shall be licensed in their trade. Install all Work and equipment to manufacturer's printed directions.
- 1.16 **Installation Requirements**
- 1.16.1 Coordinate the Work with all Divisions. Inform other Divisions of the locations of openings, chases, sleeves, supports, services, connections, etc., to be incorporated into the Work.
- 1.16.2 Check the locations of all expansion/building joints and ensure that all electrical installations are at or crossing these locations are as detailed and as required to compensate for the possible movement at the joint.
- 1.16.3 Confirm the exact location of outlets, fixtures and connections. Check Architectural details and elevations for more requirements. Confirm location of connection points for equipment supplied under other Divisions or by the Agency.
- 1.16.4 Install neatly all equipment and apparatus to allow free access for maintenance, adjustment and eventual replacement.
- 1.16.5 Install metering and/or sensing devices to provide accurate and reliable sampling of quantities being measured. Install instruments to permit easy observation.
- 1.16.6 Provide suitable shielding and physical protection for devices.
- 1.16.7 Install all Products and services in accordance with the manufacturer's requirements and/or recommendations.
- 1.16.8 Provide all supports, hangers and fasteners. Secure all Products and services so as not to impose undue stresses on the structure and systems.
- 1.16.9 Ensure that the load onto structures does not exceed the maximum loading per square meter (foot) as shown on Drawings or as directed by the Consultant.
- 1.16.10 Do not use explosive activated tools.
- 1.17 **Field Review**
- 1.17.1 The Agency and Consultant shall have access to the site at all times for review of the Work during construction.
- 1.17.2 Arrange for review of Products during manufacturing.
- 1.17.3 Provide all gauges, instruments and other necessary measuring equipment required for review of the Work.
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- 1.17.4 Maintain a complete set of Contract Documents at all times for field reference by the Consultant.
 - 1.17.5 Correct any deficiencies as they are reported during the performance of the Work.
- 1.18 **Temporary Services**
- 1.18.1 Provide temporary office, workshop and tools and material storage space for the Work and assume responsibility for any loss or damage thereto. Buildings erected for this purpose shall conform in appearance to those erected for similar purposes under other Divisions of Specification.
 - 1.18.2 Provide temporary lighting for whole construction area. Coordinate with Contractor for requirements.
 - 1.18.3 Provide scaffolding and shoring necessary for Work of this Division. Scaffolding and shoring shall be adequate to protect the workers according to Provincial and Local Regulations.
 - 1.18.4 Provide rigging and millwrighting, labour and equipment necessary for the Work of this Division. Employ only workers well experienced and skilled in such trades for this portion of the Work.
 - 1.18.5 Provide hoisting machinery, operators, labour and materials necessary to lift and place equipment supplied under this Division.
 - 1.18.6 The permanent systems or any part thereof shall not be used during construction for construction purposes, unless so permitted by the Agency, in writing.
- 1.19 **Protection And Cleaning**
- 1.19.1 Securely plug or cap open ends of electrical raceways or equipment to prevent entry of dirt, dust, debris, water, snow or ice.
 - 1.19.2 Equipment stored on site shall be protected from weather and kept dry and clean at all times. Take care to avoid corrosion of metal parts.
 - 1.19.3 Protect all finished and unfinished Work of this and other Divisions from damage due to carrying out of this Work.
 - 1.19.4 Make good any damage caused directly or indirectly to walls, floors, ceilings, woodwork, brickwork, finishes, etc.
 - 1.19.5 Before energizing any systems, inspect and clean the inside of all panelboards, switchgear and cabinets to ensure that they are completely free from dust and debris.
 - 1.19.6 Clean all polished, painted and plated work. Clean all lighting fixtures. Remove all debris, surplus material and tools.
 - 1.19.7 Carry out additional cleaning operations of systems as specified in other Sections of this Division and as Division 1 requirements.
- 1.20 **Waste Management And Disposal**
- 1.20.1 Separate and recycle waste materials.
 - 1.20.2 Divert unused wiring and metal materials to metal recycling facility, or place in appropriate on-site bins for recycling in accordance with Contractor's requirements.

1.21 Mock-Ups And Trial Usage

- 1.21.1 Provide mock-ups in accordance with the conditions stated in the Contract Form and Division 1 of the Specifications.
- 1.21.2 Trial usage of any equipment or materials shall not be construed as evidence of acceptance of same and no claim for damage shall be made for injury to or breaking of any part of such work which may be so used.

1.22 Commissioning

- 1.22.1 Be responsible for commissioning of all Work provided under this Division. The total commissioning requirements of this Division involve:
- .1 Complete activation of all systems.
 - .2 Re-torquing of all bolted connections in all distribution equipment.
 - .3 Calibration, testing and verification of all systems.
- 1.22.2 Commissioning shall commence with activation and verification of all systems in accordance with requirements of the Specifications. This will include but not be limited to the following items to be tested, adjusted and verified:
- .1 Primary switchgear.
 - .2 Secondary switchgear.
 - .3 Transformers.
 - .4 Lighting and power distribution.
 - .5 Fire alarm systems.
 - .6 Emergency power system including transfer functions and interlocks.
 - .7 Emergency lighting system
 - .8 Electric heating equipment/system

1.23 Testing

- 1.23.1 Carry out all tests specified and tests required by authorities having jurisdiction. The testing and adjusting is the responsibility of this Division.
- 1.23.2 Provide all equipment, labour, instruments, expenses of the manufacturer's representative, and incidentals, and pay for all power and fuel required to carry out the tests.
- 1.23.3 Submit the record of all tests and have these tests signed by Contractor's Superintendent and, where applicable the manufacturer's representative. Show in schedule form a record of the systems or parts of systems tested, the date of the test, the circumstances such as current, temperatures, etc., the duration of the test and any special remarks pertaining to events during the test. Note which tests have been witnessed by authorities having jurisdiction.
- 1.23.4 Submit certification letters from the manufacturers of all equipment certifying that their technical representatives have inspected and tested their equipment and are satisfied with the methods of installation and operation. Where existing systems are extended,

provide letters covering both new and existing equipment and connections. These letters shall state the names of persons present at testing, methods used and a list of functions performed with location and room numbers where applicable.

- 1.23.5 Conduct the following tests, but not limited to:
- .1 Fire alarm system test.
 - .2 Emergency lighting system test.
 - .3 Emergency power system test.
 - .4 Power distribution, including control and switching, polarity tests, voltage-drop tests and phase balancing measurement
 - .5 General operations: energize and operate electrical circuit and item.
 - .6 Circuits originating from branch distribution panels.
 - .7 Lighting and lighting control.
 - .8 Motors, heaters and associated control equipment, including sequenced operation.
 - .9 Di-electric tests, hi-pot tests, insulation resistance tests and ground continuity tests as required by nature of various systems and equipment.
 - .10 Demonstrate systems operation.
 - .11 Repair, alter, replace, test and adjust as necessary for a complete and operating electrical system.

1.24 **Inspection**

- 1.24.1 Arrange for inspection of all Work by the authorities having jurisdiction. On completion of the Work furnish final unconditional certificates of approval by the inspection authorities.
- 1.24.2 Application for final review will be considered when the Work has been completed and written declarations submitted that all commissioning, testing adjustment, set up and documentation is complete. Final review shall be done when:
- .1 All reported deficiencies have been corrected.
 - .2 All systems have been balanced, tested, commissioned and are operational.
 - .3 The Agency has been instructed in the operation and maintenance of all equipment.
 - .4 All reports have been submitted and reviewed.
 - .5 All maintenance manuals have been submitted and reviewed.
 - .6 All tags and nameplates are in place and all data submitted and reviewed.
 - .7 Cleaning up is finished in all respects.
 - .8 All certificates are furnished.
 - .9 All spare parts and replacement parts specified have been provided.
 - .10 All record Drawings have been submitted and reviewed.

1.25 **Demonstration And Instruction**

- 1.25.1 Provide personnel, equipment and tools to demonstrate and instruct Agency's designated personnel in operation, controlling, adjusting, trouble-shooting and servicing of all systems and equipment to satisfaction of the Agency. This Work shall take place during Agency's regular business hours prior to acceptance.
- 1.25.2 Where specified elsewhere in this Division, manufacturers shall provide demonstration and instructions.
- 1.25.3 Where deemed necessary, the Consultant or Agency's agent may record these demonstrations via video tape or other means for future reference.

1.26 **Warranty**

- 1.26.1 Provide a written guarantee stating that systems, equipment, components, etc. have been installed to manufacturer's instructions, that systems meet the Contract requirements and that all deficiencies in material and labour occurring within one year after substantial completion, will be corrected at no charge.
- 1.26.2 Obtain Product warranties in excess of two (2) year from the manufacturer on behalf of the Agency. These Product warranties shall be issued by the manufacturer to the benefit of the Agency.
- 1.26.3 Instruct all manufacturers and suppliers that warranties on Products will commence at the date of Substantial Performance and not from the date the Products are put into operation.
- 1.26.4 All corrections to deficiencies listed in field review reports and other correspondence, as well as but not limited to those indicated in testing, adjusting, balancing and commissioning shall be completed prior to turn over.
- 1.26.5 Prior to the end of the one-year and two-year warranty periods following the date of Substantial Performance of the Work, perform with the Agency inspections of the Work and review any defects or deficiencies which have been observed and reported during that period. Perform appropriate repairs to the Work in accordance with the Construction Contract Documents.

2 **PRODUCTS** – NOT APPLICABLE.3 **EXECUTION** – NOT APPLICABLE.**END OF SECTION**

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- 1 **GENERAL**
- 1.1 **Summary**
- 1.1.1 This section of specification is an integral part of the Contract Documents and shall be read accordingly.
- 1.1.2 Comply with Section 26 01 00, Electrical General Requirements.
- 1.1.3 Work to be done under this Section shall include furnishings of labour, materials, and equipment required for installation, testing and putting into proper operation complete Electrical systems as specified, as shown and as otherwise required. Complete systems shall be left ready for continuous and efficient satisfactory operation.
- 1.2 **Submittals**
- 1.2.1 Submit Shop Drawings and product data for products specified in this section in accordance with Section 26 01 00, Electrical General Requirements.
- 1.3 **Products**
- 1.3.1 Products shall be new, of Canadian manufacture where available, first quality and uniform throughout. Submit proposal based on the use of products and equipment specified, or on the listed acceptable alternate equipment as further detailed.
- 1.3.2 Electrical products shall be C.S.A. approved and be so labeled. Products not C.S.A. approved shall receive acceptance for installation by Ontario Hydro Special Inspections Branch before delivery, and modifications and charges required for such acceptance shall be included in Work of this Section. Products shall not be installed or connected to the source of electrical power until approval is obtained.
- 1.3.3 Where manufacturer is not specified provide products of high commercial standard and quality consistent with the standards of these specifications. Provide products of same manufacture for like applications unless noted otherwise.
- 1.3.4 Products shall be designed and manufactured in accordance with latest issue of applicable Standards or Authorities when such are either mentioned herein, or have jurisdiction over such materials or items of equipment. Confirm capacity, ratings and characteristics of products being provided to supply power to equipment provided under other Sections of the Work. Resolve discrepancies before such items are purchased.
- 1.3.5 Acceptance of products installed presumes that products have not been damaged or exposed to conditions that would adversely affect performance and life expectancy. If in the opinion of the Consultant, products have sustained damage, or have been exposed to abnormal conditions it shall be the responsibility of the Contractor to have such tests performed as deemed necessary by the Consultant to establish condition and therefore, acceptability of installed products.
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2 PRODUCTS**2.1 Electrical Identification****2.1.1 Cable and conduit**

- .1 Identify conduits and cables for the various systems by the use of the following distinctive coloured labels. The Labels shall comprise pressure sensitive plastic tape with printing labels indicating the system. Apply a small area of paint to the inside of each outlet box, pull box and panel as it is being installed. Identify junction boxes in suspended ceiling areas with colour on both inside and outside.
 - .1 120/208 volt system - yellow
 - .2 347/600 volt system – white
 - .3 Emergency power - orange
 - .4 Fire alarm systems – red
 - .5 Cable TV systems – purple
 - .6 Telephone systems – blue
 - .7 Security/Intercom/CATV systems – black
 - .8 Other telecommunication systems - grey
- .2 Locate identification labels at follows:
 - .1 Behind each access.
 - .2 At each change of direction, at junction boxes, and at both ends of each run.
 - .3 At not more than 15m apart in straight runs.
 - .4 Where passing through a wall, partition, and floor. One on each side of wall, partition, and floor.

2.1.2 Cable and conduit labels

- .1 For power and lighting system feeders, install labels at either end of the conductors where terminated inside of equipment to match wiring diagram conductor identification or panelboard circuit numbers. Typical identification Panel AA circuit - 21; use "AA-21". For a three phase circuit provide identification on phase A conductor only. For a single phase circuit provide identification on the phase conductor.
- .2 For lighting branch circuits identify circuit at panel and in outlet box connection to lighting fixture. Install label on phase conductor tap-off. Typical identification if fixture connected to Panel A, circuit 5; marker identification A-5.
- .3 For branch circuits supplying single phase and three phase devices such as receptacles and connections to equipment identify conductors at panel and in device outlet box. Install label on phase conductor inside outlet box. Typical identification if device is connected to Panel B - circuit 14, marker identification "B-14".
- .4 For switchboards identify all control conductors at terminal strips inside equipment and where terminated at all remote devices. Identification shall match numbering system on Drawings and "Reviewed" Shop Drawings.
- .5 For fire alarm systems, identify all conductors at terminal strips located in:
 - .1 Control panels.

- .2 Annunciators.
- .3 Printers.
- .4 Local terminal cabinets.
- .5 All remote devices.
- .6 All connections in the system.
- .7 Provide identification in accordance with the numbering system on the "Reviewed" Shop Drawings.
- .6 For miscellaneous systems identify all conductors at terminal strips located in:
 - .1 Control and/or monitoring panels.
 - .2 Control and/or monitoring stations.
 - .3 Local terminal cabinets.
 - .4 All remote devices.
 - .5 All connections in the system.
 - .6 Provide identification in accordance with the numbering system on the "Reviewed" Shop Drawings.
- 2.1.3 Equipment nameplates
 - .1 Provide lamacoid name plates, white background with black engraved letters 10mm high, for electrical equipment but not limited to panels, switchboards, transformers, disconnect switches, breakers, contactors, relay panels, starters, TVSS, FACP and miscellaneous panels.
 - .2 Nameplates shall indicate voltage, capacity, upstream, and downstream equipment Typical identification for panel: "Lighting Panel C, 120/208 v, 3 phase, 4 W. Supplied from Panel BB".
 - .3 Switchboards - Plates to be mounted on face of switchboards. Typical identification for switchboard: "Switchboard AAA - 120/208 V, 3 phase, 4 W". Typical identification for branch feeders: "Power Panel BB".
 - .4 Install plates after all painting has been completed. Secure with mechanical fastening devices except on the inside of panel doors where gluing will be acceptable.
- 2.1.4 Power system colour code
 - .1 Power system phase colour code:
 - .1 Red - Phase A.
 - .2 Black - Phase B.
 - .3 Blue - Phase C.
 - .4 Neutral – White.
 - .5 Ground - Green.
 - .2 Identify incoming utility service lines with enamel paint to above colour code.
 - .3 Band buses in switch board and panels to above colour code.
 - .4 Provide branch conductor to above colour code.
- 2.1.5 Manufacturer's nameplates
 - .1 Have the manufacturer's nameplates affixed to each item of all equipment showing the size, name of equipment, serial number and all information usually provided, including voltage, cycle, phase, horsepower, etc., and the name of the manufacturer and their address. Ensure that all stamped,

etched or engraved lettering on plates is perfectly legible. Ensure that nameplates are not painted over. Where apparatus is to be concealed, attach the nameplate in an approved location on the equipment support or frame.

- .2 Ensure that panels and other apparatus which have exposed faces in finished areas do not have any visible trademarks or other identifying symbols. Mount nameplates behind doors.

2.1.6 Signage

- .1 Provide signage to local inspection authority on all equipment and electrical rooms.
- .2 The suitable warning signs must be installed as per Electrical Safety Code.
- .3 Where applicable, provide warning signs for ground fault protection circuit as required by OESC section 68-068.
- .4 Where applicable, provide warning signs and marking for the power disconnect switches for fire pumps as per NFPA-20, section 9.3.

2.1.7 Single line distribution Drawings

- .1 Provide clear acrylic covered framed as-built single line distribution system Drawing of the entire project in the main electrical room. Distribution system shall be CAD generated. Size shall be minimum 305 x 460mm with all text legible. Provide interim Drawings until such time that permanent as-built Drawings are available for permanent installation.

2.2 Wires And Cables

2.2.1 Comply with the requirements of the latest editions of the followings:

- .1 CSA C22.2 No. 0.3, Test Methods for Electrical Wires and Cables.
- .2 CAN/CSA-C22.2 No.131 – Type TECK 90 Cable.
- .3 CSA C22.2 No. 38, Thermoset Insulated Wires and Cables.
- .4 CSA C22.2 No. 75, Thermoplastic-Insulated Wires and Cables
- .5 CSA C22.2 No. 65, Wire Connectors.

2.2.2 Use copper conductors T90 or RW90, 90oC rated insulation unless otherwise noted.

2.2.3 Aluminum conductors (90 degrees Celsius (°C) rated insulation) may be used where noted, in sizes #2 AWG and larger, applied with corrosion preventing compound and hydraulic or powder activated tools, are used for all connections. Where aluminum conductors used for specified copper conductors, provide larger conduits as required by Code, size conductors to meet design requirements of capacity and voltage drop.

2.2.4 For a residential branch circuit protected by 15A circuit breaker, #14 AWG copper conductors may be used where the home run does not exceed 27m.

2.2.5 Solid conductors of #12AWG and smaller. Stranded conductors for #10 AWG and larger.

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- 2.2.6 Except as indicated hereinafter, wire for 120 volt lighting and receptacle branch circuits to be #12 AWG except that #10 minimum to be used where the home run exceeds 27m (90'). Wire for 120 volt control circuits to be #12 AWG minimum, and for 24 volt control circuits to be #16 AWG minimum.
- 2.2.7 For wiring through or in lighting fixtures use type 'GTF' fixture wire, rated 600 volts to meet code requirements for recessed fixtures.
- 2.2.8 Wire to ceiling outlet boxes on which a lighting fixture is or may be mounted, with conductors having insulation suitable for 90 degrees Celsius (°C).
- 2.2.9 Cables located in plenum, ceiling or floor spaces shall be totally enclosed in non-combustible conduit or raceway or be armoured cable where permitted by the Ontario Building Code.
- 2.2.10 Unless specified otherwise, wire for branch circuits shall be 2#12 + Grd in 16mm conduit.
- 2.2.11 Wires and cables for outdoor locations shall be minus 40 degrees Celsius (°C) rated.
- 2.2.12 Armoured cables shall be complete with interlocked aluminum armour, approved fastening and connectors and meet the requirements of Vertical Flame Test-Cables in Cable Tray of CSA C22.2 No. 0.3. The PVC jacket cables (TECK 90 and ACWU90) shall be FT6 rated.
- 2.2.13 Install all wiring in conduit, unless indicated as armoured. Route wire and cable to meet Project conditions. Use suitable cable fittings and connectors.
- 2.2.14 Use an approved lubricant to assist in pulling conductors through conduit. Neatly train and lace wiring inside boxes, equipment and panelboards.
- 2.2.15 Balance the loading on feeders so that unbalanced load is less than 10 percent (%).
- 2.2.16 Limit the voltage drop at the end of feeders and branch circuits to 2 percent (%) at the rated load of the circuit.
- 2.2.17 For single conductor armoured cables, where required to conform to the Electrical Safety Code, Rule 12-108, Bulletin 12-7-11.
- 2.2.18 Lighting fixture wiring in accessible ceiling spaces shall be run in conduit from the lighting panel to ceiling outlet boxes with armoured cable drops no longer than 3.0m (10 ft.) permissible from the boxes to fixtures.
- 2.2.19 Protect all exposed non-armoured cables in manholes, pull pits and trenches with an approved fire protective fiberglass tape of '3M' manufacture or approved equal. Extend the protective wrapping on the cables where they leave pull pits or trenches below switchgear to the circuit breaker or fused switch terminals. Rack cables in manholes and pull pits to provide clear access for maintenance and servicing.
- 2.2.20 Use BX for concealed locations of existing wall. Where BX is not practical for an existing wall, run wires in metal wire way surface mounted in finished area.
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- 2.2.21 Splice wire, up to and including No. 6 gauge, with nylon insulated expandable spring pressure type connectors. Splice large conductors using compression type connections insulated with heat shrink sleeves.
- 2.2.22 Regardless shown or not on the Drawings, all wiring for emergency systems shall be protected by one-hour rated enclosure unless otherwise noted, in accordance with the Ontario Building Code and authorities having jurisdiction. This will include but not necessarily be restricted to the following systems:
- .1 Fire alarm system. Trunk wiring and main risers, not including branch wiring to terminal devices within a fire zone.
 - .2 All power and control wiring to firefighting pumps.
 - .3 Equipment used for the purpose of smoke venting; all power and control trunk wiring for all the fans, and associated dampers and powered doors.
 - .4 Power and control wiring for all pressurization fans, and associated dampers and powered doors.
 - .5 Wiring related to supply of emergency power to elevators.
 - .6 Feeders to emergency panels.
 - .7 Power supply to fire alarm panel.
 - .8 Power supply to any other life safety loads.
- 2.2.23 Where a one-hour fire rating is required, this may be achieved by:
- .1 Installing conduit in rated separate electrical service shafts and/or electrical rooms.
 - .2 Installing conduit embedded in building concrete structure to provide one-hour rating. The depth of concrete structure protecting cable shall be around 50mm, or pre-approved by Building Inspector.
 - .3 Provide one-hour rated enclosure where cable turn out from concrete structure.
 - .4 Use of ULC minimum one-hour rated mineral insulated cables.
 - .5 Use of ULC minimum one-hour rated cables in EMT and/or steel conduits in accordance with manufacturer's requirements and specifications.

2.3 **Raceways And Fitting**

- 2.3.1 Drawings do not show all raceways. Those shown are generally in diagrammatic form only.
- 2.3.2 Comply with the requirements of the latest editions of the following:
- .1 CAN/CSA C22.2 No. 18, Outlet Boxes, Conduit Boxes, Fittings and Associated Hardware.
 - .2 CSA C22.2 No. 45, Rigid Metal Conduit.
 - .3 CSA C22.2 No. 56, Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit.
 - .4 CSA C22.2 No. 62, Surface Raceways and Lighting Fixture Raceways and Fittings.
 - .5 CSA C22.2 No. 83, Electrical Metallic Tubing.
 - .6 CSA C22.2 No. 126, Cable Tray System.
 - .7 CSA C22.2 No. 211.2, Rigid PVC (Un-plasticized) Conduit.

- .8 CAN/CSA C22.2 No. 227.3, Flexible Non-metallic Tubing.
 - .9 CSA C22 No. 18, Outlet Boxes, Conduits Boxes, Fittings and Associated Hardware.
- 2.3.3 Conduits
- .1 Rigid steel conduit hot dip galvanized inside and outside installed:
 - .1 On the exterior of building;
 - .2 Where exposed to mechanical damage;
 - .3 Where conduits turn up or turn down out of concrete slab;
 - .4 Damp and wet locations.
 - .2 Steel galvanized electrical metallic tubing (EMT) installed:
 - .1 In partitions;
 - .2 In ceiling spaces;
 - .3 In service spaces.
 - .4 In masonry walls.
 - .3 Rigid PVC (un-plasticized) conduit except for exit light, emergency lighting, and fire alarm system installed:
 - .1 In slabs with rigid steel galvanized turn-up;
 - .1 Underground with rigid steel galvanized turn-up;
 - .2 In concrete walls;
 - .3 Damp and wet locations.
 - .4 Flexible armoured conduit:
 - .1 In partitions;
 - .2 For lighting fixture drops;
 - .3 From ceiling junction boxes into wall outlets;
 - .4 Flexible armoured conduits shall be limited to 3m lengths where run horizontally from take-off junction boxes.
 - .5 Liquid tight flexible conduit
 - .1 Final connection to motors.
 - .2 Any equipment which vibrates or generates noise.
 - .6 For EMT use steel concrete tight set screw fittings as manufactured by T & B or equal. Die cast or pressure cast fittings are not acceptable. For rigid steel conduit use only steel or malleable iron threaded fittings. Threadless, die cast or pressure cast fittings are not acceptable.
 - .7 ENT might be used where permitted by OESC, provided with mechanical protection as required by OESC.
 - .8 Provide bushings on the ends of all conduits in enclosure, boxes, panels and cabinets, to protect the conductor installation. Except where grounding bushings are specified, use all plastic insulated bushings temperature rating 150°C with double locknuts.
 - .9 Use PVC conduit for all landscaping locations where conduit comes in contact with soil. Refer to Landscape Drawings for final elevation of planting soil. Co-ordinate and adjust electrical devices accordingly.
 - .10 Conceal all conduits except in service spaces, mechanical rooms, electrical rooms and areas with ceilings.

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- .11 Install all locknuts and bushings to ensure a secure mechanical and electrical bond. Use Erickson couplings in lieu of running threads.
 - .12 Where conduit joints occur in concrete, use silicone sealing compound to make water tight.
 - .13 Lay out conduit to drain free of all moisture.
 - .14 Securely hold conduits in place in concrete or masonry during pouring and construction operations; provide templates, forms and spacers as necessary.
 - .15 Support multiple runs of conduit on channel or angle iron with rod hangers.
 - .16 Secure all conduits in place with conduit clamps T & B or equal. Perforated pipe straps, wire lashings, wood screws or nails are not acceptable.
 - .17 Provide conduit expansion joints where conduits cross building expansion joints, also in straight runs of conduit 30 m (100') or longer. Conduit expansion joints shall be telescoping sleeve type, with insulated bushings and ground jumper.
 - .18 Make field bends and offsets uniform and symmetrical without flattening conduit. Minimum bending radius shall be ten (10) times the conduit diameter.
 - .19 Ream conduit ends to remove burrs and sharp edges. Fit conduit stubs with waterproof plastic caps during installation to protect threads and to prevent entrance of moisture into conduit.
 - .20 Test all conduits for clear bore using ball mandrel, brushes and snake. Clear any conduit which rejects the ball mandrel. Replace if necessary. Bear all costs involved in making all work good, restoring all surfaces to original condition.
 - .21 Install a continuous nylon cord 180 kg (400 lb) test in each conduit left empty.
 - .22 Install a copper ground conductor within the flexible conduit at each connection.
 - .23 Provide conduit seals in conduits which pass to the outside.
 - .24 Provide pull boxes, fittings or junction boxes in conduit runs, on the basis of not more than two (2) right angle bends or their equivalent or not more than 30 m (100'), in straight runs between boxes. For outdoor direct buried conduit, up to 50m.
 - .25 Size conduits to code requirements, provide larger sizes where noted.
 - .26 Size conduits for low voltage wiring to manufacturer's recommendations.
 - .27 Provide conduit sealing fittings and correspond for hazardous application to Electrical Safety code requirements.
 - .28 Maximum conduit size permitted in a concrete slab shall be 35mm. In any case verify with Structural Consultant for acceptability.
 - .29 Where multi-conduits parallel run and/or crossover in concrete slab/wall, verify with Structural Consultant for acceptability.
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- 2.3.4 Cable tray:
- .1 Provide cable tray where noted on the Drawings.
 - .2 Cable tray shall be basket type, continuous, welded steel wire mesh, and cable tray with the following features:
 - .1 Permits continuous ventilation of cable and maximum dissipation of heat.
 - .2 Continuous safety edge T-welded wire lip.
 - .3 Welded at all intersections.
 - .4 Straight sections shall be minimum 100mm x 300mm in configurations unless otherwise noted.
 - .5 Constructed of carbon steel wire, ASTM A 510, grade 1008. Wire welded, bent, and surface treated after manufacture.
 - .6 Post fabrication finish of electro-plated zinc galvanizing: ASTM B 633, Type 111, SC-1.
 - .7 Fittings: Field fabricated in accordance with manufacturer's instructions from straight sections.
 - .3 The support system shall be Cablofil Field Mate hanger system. The necessary hardware, including splice connectors and support components furnished by manufacturer.
- 2.3.5 Surface metal raceway:
- .1 The surface metal raceway systems shall consist of surface metal raceway, appropriate fittings and device brackets to complete installation.
 - .2 The raceway is to be utilized in dry interior locations only as per Ontario Electrical Safety Code.
 - .3 Submit Drawings for approval showing the complete layout of all products that make up the complete system for each floor prior to installation with raceway lengths, device type (power and data), locations and circuits identified, complete with data sheets and samples.
 - .4 The surface raceway system specified herein for branch circuit wiring and data network, voice, video and other low-voltage wiring shall be Legrand Wiremold DS4000 Series or approved equal. The raceway shall be metal, two-piece design with a base and a snap-on cover. The raceway shall be complete with one integral barrier in the base for power/data separation. Power shall be in top; data in the bottom. Finish shall be ivory unless otherwise noted.
 - .5 For individual devices located on surfaces where conduit cannot be recessed provide single or double channel raceway system products.
 - .6 Receptacle / Data plates shall be compatible with Wiremold DS4000 series as specified, or approved equal.
- 2.3.6 Install raceways system complete with appropriate fittings such as connectors, bushings, elbows, couplings, locknuts, expansion fittings, fasteners and supports and accessories supplied as integral parts of assembly, as specified. Installation shall comply with Regulatory Authorities requirements.
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- 2.3.7 Neatly install exposed raceway running parallel to and at right angles to building lines and equally spaced in groups.
- 2.3.8 Keep raceway ends parallel and on proper spacing to suit knockouts or raceway openings in equipment or enclosure.
- 2.3.9 Keep raceways at least 150mm clear of heating pipes, flues and hot item surfaces. Where required clearance cannot be provided, obtain written approval from engineer to alter layout or to reduce clearance.
- 2.3.10 Provide expansion couplings, with bonding jumper and ground clamps where raceways cross building control joints.
- 2.3.11 Use only metallic, enclosed raceway on installation that required shielding of electrical cables or where installed in ceiling used as return air plenum, as specified or indicated on Drawings.
- 2.3.12 Raceways shall have established positive low resistance paths to ground and effectively isolate conductors so that any short-circuit arc is confined.
- 2.3.13 Select appropriate fittings, such as grounding bushings, bonding and grounding straps, to maintain continuity and effectiveness of grounding of raceway system.
- 2.3.14 Provide necessary fasteners and supports acceptable for type and size of raceways, to ensure rigid, complete assembly.
- 2.3.15 Provide suitable inserts or expansion type machine bolts for fastening raceways, fittings, boxes and equipment to concrete surfaces.
- 2.3.16 Do not use wood screws, lag screws, expansion shields, rawl plugs and nylon inserts.
- 2.3.17 Secure raceway and other associate work to structure members. Raceway shall not be supported from ceiling suspension system.
- 2.3.18 Thoroughly clean raceway and dry clear obstructions before pulling cable or wire.
- 2.3.19 Minimum raceway size: 16mm conduit equivalent system.

2.4 **Outlet And Conduit Boxes**

- 2.4.1 Comply with the requirements of latest edition of the followings:
 - .1 CSA Standard C22.2 No.18, Outlet Boxes, Conduit Boxes and Fittings.
 - .2 CSA Standard C22.2 No. 85, Rigid PVC Boxes and Fittings.
- 2.4.2 Outlet and conduit boxes - general
 - .1 Size boxes in accordance with CSA C22.1.
 - .2 102mm square or larger outlet boxes as required for special devices.
 - .3 Gang boxes where wiring devices are grouped.
 - .4 Blank cover plates for boxes without wiring devices.
 - .5 347V outlet boxes for 347V switching devices.
 - .6 Combination ganged boxes with appropriate steel removable barriers where outlets for more than one system are grouped.
 - .7 Where standard make boxes are not suitable, provide boxes of special design to fit space and other requirements.

- .8 Where vapour proof lighting is specified, provide matching vapour proof ceiling or wall junction boxes and fittings as required.
- 2.4.3 Sheet steel outlet boxes
 - .1 Electro-galvanized steel single and multi-gang flush device boxes for flush installation, minimum size 76 x 50 x 38mm or as indicated. 102mm square outlet boxes when more than one conduit enters one side with extension and plaster rings as required.
 - .2 Electro-galvanized steel utility boxes for outlets connected to surface-mounted EMT conduit, minimum size 102 x 54 x 48mm.
 - .3 102mm square or octagonal outlet boxes complete with steel fixture studs where supporting lighting fixtures. Die cast fittings not permitted.
 - .4 102mm square outlet boxes with extension and plaster rings for lush mounting devices in finished plaster or tile walls.
- 2.4.4 Masonry boxes
 - .1 Electro-galvanized stamped steel masonry single and multi-gang boxes for devices flush mounted in exposed block walls, minimum size 95x 50 x 64mm standard and 102 x 57 x 61mm for 347V.
- 2.4.5 Concrete boxes
 - .1 Electro-galvanized stamped steel concrete type boxes for flush mount in concrete with matching extension and plaster rings as required.
- 2.4.6 Floor boxes
 - .1 Concrete tight electro-galvanized sheet steel floor boxes with adjustable finishing rings to suit floor finish with brushed aluminum faceplate. Device mounting plate to accommodate short or long ear receptacles. Minimum depth: 28mm for receptacles; 73mm for communication equipment.
 - .2 Round (Floor Mount): 84mm x 63mm deep minimum complete with side and bottom knock-outs.
 - .3 Rectangular: one, two, or three gang flush device floor boxes minimum size 110 x 81 x 70mm removable barriers for power/low voltage cables, complete with side and bottom knockouts.
 - .4 Multi-Outlet: Electro-galvanized tamped steel concrete type, combination power / communication, flush mounting complete with modular device plates, side and bottom knockouts, lift-up cast aluminium recessed cover and cable lid, black epoxy powder finished 229x257x76mm deep, or 64mm deep.
 - .5 Adjustable, watertight, concrete tight, cast floor boxes with openings drilled and tapped for 16mm and 21mm conduit.
 - .6 Raised Access Floor Boxes
 - .1 Electro-galvanized steel, combination power and communication. Flush in raised floor tile complete with lift-up cast aluminum recessed cover and cable lid.

- Modular device plates, 254m flexible armoured cable and plug for power.
- .2 Dimensions: 203 x 152 x 114mm.
- 2.4.7 Conduit boxes
- .1 Cast FS or FD aluminum, or feraloy boxes with factory-threaded hubs and mounting feet for surface wiring of switches and receptacles.
- .2 PVC FS or FD boxes or PVC conduit where required in special corrosive areas as indicated on Drawing.
- 2.4.8 Fittings - general
- .1 Bushing and connectors with nylon insulated throats.
- .2 Knock-out fillers to prevent entry of debris.
- .3 Conduit outlet bodies for conduit up to 35mm and pull boxes for larger conduits.
- .4 Double locknuts and insulated bushings on sheet metal boxes.
- 2.4.9 Installation
- .1 Support boxes independently of connecting conduits.
- .2 Fill boxes with paper, sponges or foam or similar approved material to prevent entry of debris during construction. Remove upon completion of Work.
- .3 For flush installations mount outlets flush with finished wall using plaster rings to permit wall finish to come with 6 mm of opening.
- .4 Provide correct size of openings in boxes for conduit, mineral insulated and armoured cable connections. Reducing washer are not allowed.
- .5 Size and install appropriate boxes and enclosures in accordance with applicable section(s) of Ontario Hydro Electrical Safety Code and manufacturer's recommended procedures.
- .6 Co-ordinate location and installation of boxes so as to be accessible and clear from building system equipment, etc.
- .7 Install pull boxes in inconspicuous but accessible locations.
- .8 Use pull boxes for conduits larger than 35mm. Use conduit outlet bodies for conduit 35mm.
- .9 Provide approved hole plugs in unused conduit knockouts and openings.
- .10 Furnish boxes and enclosures with corrosion resistant machine screws.
- .11 Boxes and enclosures embedded in concrete for flush-mounted, shall be secured properly with connecting conduits and related works set in place before concrete is poured. Forms, when used, shall be able to be removed without disturbing installed boxes or enclosures.
- .12 Ensure junction and outlet boxes mounted in ceiling cavities do not interfere with removal of ceiling tiles.
- .13 Use masonry boxes for flush mounting in exposed block walls, concrete boxes for flush mounting in concrete wall.

- .14 Furnish conduit boxes with neoprene gaskets for outdoor area or hazardous area application.
- .15 Install all wall boxes for door security access devices, fire alarm devices, etc., adjacent to lock side of door openings unless otherwise shown. Check door swing before installing any switch.
- .16 Install all boxes in walls so that tapped holes for mounting wiring devices or fixtures will be aligned vertically or horizontally, as required. Where boxes are grouped at one location with common and varying mounting heights, align boxes horizontally and vertically from centre line unless otherwise indicated.
- .17 Offset outlet boxes in sound attenuating partitions to avoid undue transmission of sound between the partition elements. Use flexible conduit connections where wiring is required between outlet boxes on opposite sides of partition.
- .18 Offset outlet boxes where installed on either side of a fire separation.
- .19 Where steel supports are required for outlet boxes, wood supports are not acceptable.
- .20 Maintain integrity of vapour barriers along building perimeter wall where flush outlet boxes are required.

2.5 Access Panels And Doors

- 2.5.1 All access panels and doors to be Milcor or Bel, 12 gauge with concealed hinges.
- 2.5.2 In glazed tile walls provide #304 alloy stainless steel with #4 finish recessed frame and secured with stainless steel countersunk flush head screws.
- 2.5.3 In plaster surfaces provide dished steel door for plaster finish with welded metal lath and plastic grommet for keyhole.
- 2.5.4 In other finishes use plain steel door with lock and anchor straps, complete with factory prime coat.
- 2.5.5 In lay-in ceilings, tiles properly marked may serve as access panels.
- 2.5.6 Provide the appropriate Division of Work with panels and doors, complete with frames and all pertinent information for installation. Arrange and pay for that Division to install them. Ensure that all panels and doors are flush mounted and properly aligned with building modules and grids. Indicate locations on record Drawings.
- 2.5.7 Select all access panels and doors to provide adequate access, and to suit appropriate architectural finish, minimum size 150mm x 150mm. Where necessary for persons to enter, provide minimum 600mm x 450mm size doors.

2.6 Sprinkler Proof Equipment

- 2.6.1 Provide all equipment in this project with accessories to prevent the entry of water into the enclosures in the event that the sprinkler system is activated. The entire building spaces are sprinklered.
- 2.6.2 Materials
 - .1 CSA enclosure type 2.

- .2 Louvers facing outward and downward where openings are required for heat dissipation. Expanded metal screening is not acceptable.
 - .3 CSA certified sealing rings for rigid steel galvanized conduit and CSA certified raintight connectors for steel galvanized electrical metallic tubing (EMT) or other raceways as required.
- 2.6.3 Provide seal rings and watertight connectors on all conduit terminations entering the top or side of all enclosures and for all conduit terminations for pull boxes, junction boxes, splitter troughs, wireways, auxiliary gutters, cable troughs and disconnect switches installed below the level of the sprinkler heads.

2.7 **Backboards**

- 2.7.1 Provide backboards for all surface mounted power distribution equipment.
- 2.7.2 Provide backboards for telecommunication systems.
- 2.7.3 Backboards shall be minimum 19mm thick, good one (1) side fire retardant plywood backboards, pressure impregnated with fire retardant chemicals, and stamp. Conform to CSA 080.
- 2.7.4 Construct each backboard in a rectangular shape of the size as indicated. Where no size is indicated, provide a backboard a minimum 100mm higher than the equipment. Where more than one (1) piece of equipment is installed on the backboard, construct the backboard of a size to suit the maximum vertical and horizontal dimensions of the equipment. Backboards for Telecommunication system shall be minimum 100mm (W) x 200mm (H).
- 2.7.5 Finish each backboard with one (1) coat of primer followed by a minimum of one (1) finish coat of ASA 61 grey paint prior to installing any equipment.
- 2.7.6 Fastenings:
 - .1 Fasten each backboard to a wall or to a support structure using cadmium plated hardware. Provide a flat washer under the head of each fastener. Recess the head of the mounting bolt where equipment, including future equipment, is to be installed.
 - .2 Use expansion shields, toggle bolts or other types of wall fastenings to suit the wall type. Align the mounting bolts with the wall studs for stud type walls.
 - .3 Install fastenings a maximum 500mm apart in both the vertical and horizontal directions.
 - .4 When installing equipment heavier than 50kg, fasten the equipment through the backboard directly to the wall or support structure.

2.8 Sleeves And Curbs

- 2.8.1 Provide conduit sleeves of galvanized steel for conduit and cable runs passing through concrete walls, beams, slabs and floor. Cut flush with finished surface.
- 2.8.2 Extend galvanized conduit sleeves for conduit rising through slabs 100mm minimum above finished floors.
- 2.8.3 Through exterior walls below grade waterproofed floors, and other waterproof walls use heavy weight cast iron pipes machine cut. Extend sleeves 100mm above finished floors, and cut flush with underside of floor.
- 2.8.4 For rectangular duct openings for bus ducts and cable tray use minimum 18 gauge galvanized steel sleeves or provide a removable wood box-out of the required size. Brace sleeves to retain their position and shape during the pouring of concrete and other Work.
- 2.8.5 Seal all sleeves and openings to maintain fire rating. Use Dow-Corning #3-6548 'Silicone RTV' foam, Thomas & Betts 'Flamesafe' firestop system, installed in accordance with the manufacturer's specifications and recommendations. Refer to Architectural Drawings for Fire Separation locations and Fire Resistance Rating requirements.
- 2.8.6 Seal all openings and sleeves after installation of equipment:
- .1 With an approved material to maintain fire rating where sleeves and openings pass through fire separations and floors.
 - .2 With an approved material to maintain fire rating for sleeves and openings provided for future equipment.
- 2.8.7 Size sleeves to provide 13mm clearance all around.
- 2.8.8 Provide all flashing and waterproofing for sleeves through roof and exterior walls to the requirements of Division 7, Thermal and Moisture Protection.
- 2.8.9 Except where furred in provide watertight concrete curbs, 100mm high by 100mm wide with 19mm chamfered edges around all sleeves and openings passing through waterproof floors.

2.9 Supports And Bases

- 2.9.1 Submit proposed method of attachment of hangers and beam clamps, to cellular steel deck for approval before proceeding with Work.
- 2.9.2 Supply and erect special structural Work required for the installation of electrical equipment. Provide anchor bolts and other fastenings unless noted otherwise. Mount equipment required to be suspended above floor level, where details are not shown, on a frame or platform bracketed from the wall or suspended from the ceiling. Carry supports to either the ceiling or the floor, or both as required, at locations where, because wall thickness is inadequate, it is not permitted to use such brackets.
- 2.9.3 Electrical panels, switches or other electrical equipment shall be complete with suitable bases or mounting brackets.

- 2.9.4 Provide channel or other metal supports where necessary, to adequately support lighting fixtures. Do not use wood unless wood forms part of the building structure.
- 2.9.5 Secure supports, in general to structure, from inserts in concrete construction or from building structural steel beams, using beam clamps. Provide additional angle or channel steel members, required between beams for supporting conduits and cables.
- 2.9.6 Provide any additional supports required from existing concrete construction for any piping or equipment, by drilling same and installing expansion bolt cinch anchors.
- 2.9.7 Do not use explosive drive pins in any section of Work without obtaining prior approval.
- 2.9.8 Hangers for electrical conduit shall be galvanized after fabrication. Conduit hangers shall be as manufactured by:
- .1 Burndy Canada Ltd.
 - .2 Canadian Strut Products Ltd.
 - .3 E. Myatt & Co. Ltd.
 - .4 Steel City Electric Co.
 - .5 Pilgrim
 - .6 Thomas & Betts
 - .7 B-line
- 2.9.9 Do not use, perforated strapping (grappler bars).
- 2.9.10 Steel supports in wet or dry locations to be galvanized after fabrication.
- 2.9.11 Provide concrete housekeeping pads or bases for all floor mounted equipment 100mm high with 19mm chamfered edges, keyed to the floor slab and extending at least 100mm on all sides of the equipment. Where draw-out truck type circuit breakers are provided extend pad to accommodate complete withdrawal of breaker. Provide and set all anchor bolts.
- 2.9.12 Use only factory made threaded or toggle type insert.
- 2.9.13 Place inserts only in structural members and not in the finishing material.
- 2.9.14 Provide bus ducts, cable trays, and wire ways with fire barriers at each floor level and fire separation.
- 2.9.15 Provide locations and dimensions for all pads and curbs and provide and set all anchor bolts for all concrete work.
- 2.10 **Spare Parts**
- 2.10.1 Furnish spare parts and maintenance materials as recommended by the equipment manufacturer and as appropriate for a period of two (2) years after acceptance of the Work.
- 2.11 **Dry Type Transformers**
- 2.11.1 Dry-type transformers shall be three-phase indoor dry-type, 60 cycle type ANS, natural draft, air-cooled, manufactured in accordance with CEMA Specification L2, CSA C22.2 No. 47, CSA C9-1966, ASA C57.12, NEMA TRI, and latest revision thereof. They shall be metal enclosed in ventilated code gauge steel enclosures,

finished ASA No. 61. Overall dimensions of transformers shall not exceed those noted on the Drawings.

- 2.11.2 Windings for three phase transformers shall be copper 1.2 KV class, 10 KV B.I.L., high voltage winding delta-connected 600 volt; low voltage winding 208/120 & 220/120 volt wye connected. Primary winding shall include four 2-1/2 percent taps arranged two above and two below, normal voltage. Insulation to be rated Class B - 80 Degrees Celsius Unit design shall incorporate a vibration isolation system.
- 2.11.3 Transformers shall have an electrostatic shield located between the primary and secondary windings. Terminate the shield at an isolated terminal in the terminal connection area.
- 2.11.4 Transformer shall be high-efficiency type, meeting maximum loss limits specified in CSA C802-94.
- 2.11.5 Transformers shall be manufactured by:
 - .1 Rex Manufacturing
 - .2 Square 'D'
 - .3 Hammond Manufacturing
 - .4 Delta

3 **EXECUTION**

3.1 **Mounting Heights**

- 3.1.1 Mounting heights are from floor level to centre line of device outlet, unless noted otherwise. Confirm all locations before installation. In all areas accessible to persons in wheelchairs, the mounting heights of all switches, thermostats, intercom switches, pull stations, etc., required by Building Code "Barrier Free" shall comply with Code requirements.
- 3.1.2 The mounting heights of all power and lighting devices shall comply with Ontario Electrical Safety Code requirements. The mounting heights of all fire alarm devices shall comply with CSA requirements.
- 3.1.3 If mounting height of equipment is not specified or indicated, verify before proceeding with installation.
- 3.1.4 Install electrical equipment at following heights (centre of device) unless indicated otherwise.
 - .1 Wall switches, dimmers, timers, speed controllers, speaker volume controllers, thermostats and hand dryers: 1100mm.
 - .2 Wall receptacles:
 - .1 General: 400mm.
 - .2 Above top of continuous baseboard heater: 250mm.
 - .3 Above top of counters or counter splash backs: 250mm.
 - .4 In mechanical rooms: 1100mm. (gang with switch)
 - .3 Panelboards: as required by Code or as indicated.
 - .4 Telephone, TV and data outlets: 400mm.
 - .5 Wall mounted Interphone outlets: 1100mm.
 - .6 Wall mounted speakers: 150mm below ceiling.
 - .7 Doorbell pushbuttons and door open push buttons: 1200mm.
 - .8 Security key switches, card readers and intercom switches: 1200mm.
 - .9 Security wall-mounted motion sensor: 2300mm.

3.2 **Wiring Of Mechanical Equipment**

- 3.2.1 Co-ordinate all the Work with Mechanical Division. The locations of starters, motors and associated equipment indicated on the Drawings are approximate and diagrammatic only. Co-ordinate with the Work of the Mechanical Division - Mechanical Trade Sections to ensure proper location of equipment. The exact locations of conduit terminations at Mechanical units shall be determined from equipment manufactures' approved Shop Drawings. Conduits must be installed to enter only in the locations designated by equipment manufactures.
- 3.2.2 Provide all electric baseboard heaters, cabinet heaters, force flow unit heaters and heating cables. Mechanical Division shall provide electric duct heaters.
- 3.2.3 Provide safety disconnect switches required at motors by OESC whether shown on the Drawings or not. Provide power wires and connections to all mechanical equipment.
- 3.2.4 All the motor starters/controllers, and/or line voltage thermostats shall be supplied by Mechanical Division and installed by Division 26. Division 26 shall provide safety disconnect switches and power connections to the motors. Mechanical Division shall provide all the control wiring, control devices and low voltage thermostats.
- 3.2.5 Where motor starters, switches and the like, are grouped together, provide suitable plywood backboard to which all such equipment shall be secured.
- 3.2.6 Where the single-phase exhaust fan shall be controlled by manual switch, Division 26 shall provide power connections to the fan, heavy-duty toggle control switch and provide the safety disconnect means.
- 3.2.7 Wiring and connections from fire alarm system to motor starters/control panels for motor control operations. Co-ordinate with Mechanical Division.
- 3.2.8 Where applicable, power supplies to MCC. Mechanical Division will provide MCC, main lugs, power supplies and controls to motors. Division 26 shall provide Fire alarm signals to starters / control panels and MCC.

3.3 **Neutrals And Phasing**

- 3.3.1 Provide one (1) identified grounded neutral conductor for each set of branch circuits connected to different mains of each panel.
- 3.3.2 For circuits identified as computer dedicated (D) or isolated ground (IG), provide individual neutral per identified circuit.
- 3.3.3 Install a separate neutral for each GFCI circuit when the GFCI is located at the panelboard.

- 3.3.4 Connect two or three (2 or 3) circuits sharing a common neutral to different mains or phases.
- 3.3.5 Balance the connected loads across the mains of each panel to within 15 percent (%).
- 3.3.6 Circuit numbers on the panels must correspond to the numbers on the Drawings.
- 3.3.7 Connections in all equipment to be Phase A, B and C from left to right, and front to back when viewing from the front or accessible direction.

3.4 **Services To Equipment Supplied By Agency / Other Divisions**

- 3.4.1 Provide all necessary connections required for equipment supplied by the Agency and other Divisions. Examine all Drawings and Specifications and identify all requirements.
- 3.4.2 Verify the type, rating and location of all outlets and/or connections required for all equipment provided by the Agency and other Divisions.
- 3.4.3 Provide isolation devices as required to the equipment for all services.

3.5 **Provision For Future Equipment And Construction**

- 3.5.1 Spaces designated for future equipment or building expansion shall be left clear.
- 3.5.2 Provide services for future extensions complete with Products necessary for present termination and to permit future extension.
- 3.5.3 Identify each service by a permanent marker at its termination point.

3.6 **Cutting And Patching**

- 3.6.1 Provide all cutting and patching required for the Work of Division 26. Work shall be carried out in conformance with the requirements of Division 2. Include any radiography required to locate concealed services before penetrating into inaccessible locations.
- 3.6.2 Any modifications to building shall be done so as not to diminish structural, fire resistance, or smoke barrier integrity.
- 3.6.3 Proposed modifications to structure shall require acceptance by the Structural Engineer.
- 3.6.4 Consultant shall be afforded the opportunity to review the intent prior to any major cutting.

3.7 **Painting**

- 3.7.1 Provide all exposed ferrous metal work, and Products, except conduit, with at least one (1) factory prime coat or paint one prime coat on site. Clean up or wire brush all equipment before painting. Unless otherwise noted finish painting will be done under Division 9, Finishes of these Specifications.
- 3.7.2 If not factory coated, clean, wire brush and paint all ferrous supports and hangers concealed in ceiling spaces of kitchens or other similar high humidity areas. Do not paint galvanized supports and hangers.
- 3.7.3 Repaint or refinish all damaged factory applied finishes.

**Regional Municipality of Peel
Purchasing Division**

**Document 2020-546P
LOCALIZED INTERIOR RENOVATIONS
AT VARIOUS LONG-TERM CARE FACILITIES
WITHIN THE REGION OF PEEL**

**Specifications
Section 26 05 00
Basic Materials
and Methods**

- 3.7.4 Provide oil base red oxide primer applied as per manufacturer's recommendations.

END OF SECTION

BOND NUMBER _____

KNOW ALL MEN BY THESE PRESENTS THAT _____
as Principal, hereinafter called the Principal, and

_____ a corporation
created and existing under the laws of Ontario, and duly authorized to transact the business of Suretyship
in Ontario as Surety, hereinafter called the Surety, are held and firmly bound unto The Regional
Municipality of Peel as Obligee, hereinafter called the Obligee, in the amount of

_____ Dollars,

(\$ _____) lawful money of Canada, for the payment of which sum, well and
truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a written Bid to the Obligee, dated the _____ day of
_____ 20____,

for: _____

DESCRIPTION OF WORK

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal
shall have the Bid accepted within one hundred and twenty (120) days from the Closing Date and the said
Principal will, within the time required, enter into a formal contract and give the specified security to
secure the performance of the terms and conditions of the Contract, then this obligation shall be null and
void; otherwise the Principal and the Surety will pay unto the Obligee the difference in money between
the amount of the Bid of the said Principal and the amount for which the Obligee legally contracts with
another party to perform the work if the latter amount be in excess of the former.

The Principal and the Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of seven months from the date of this
Bond.

IN WITNESS WHEREOF, The Principal and the Surety have signed and sealed this Bond this _____
day of _____ 20_____.

SIGNED, SEALED AND DELIVERED

SIGNATURE OF WITNESS
(if not signed under corporate seal)

By _____ (Seal)
SIGNATURE AND SEAL OF PRINCIPAL
I/We have the authority to bind the Corporation

NAME OF WITNESS (PRINTED)

SURETY (Seal)

By _____
ATTORNEY-IN-FACT

ADDRESS AND PHONE NUMBER OF SURETY

Owner's Staff/Other Contractors Project Constructor Coordination Form

This coordination document must be completed and signed by the General Contractor (GC) and the Region of Peel (ROP) Project Manager. The Owner's Staff/Other Contractors Project Constructor Coordination Form is intended to seek the GC's approval to allow Owner's Staff/Other Contractors to access a construction site while the GC maintains the overall responsibility of the project site as the Constructor on the project site. By signing below, the GC will maintain Constructor designation and site responsibility including the coordination of Owner's Staff/Other Contractors as approved to complete work on site.

PART A: To be completed by Region of Peel Project Manager or staff requesting access

Request to attend Construction Site to complete work:			
Location:		Description of work and site interaction:	
From date:	Time:	To Date:	Time:
Owner's Staff/Other Contractors to attend project site: (by signing below, Owner's Staff/Other Contractors agree to follow the GC/Constructors' established health and safety rules and instructions on the project site at all times, including following the identified sign-in process whenever attending the project site)			
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	
Name:	Title:	Signature:	

Owner's Staff/Other Contractors Supervisor or Assistant (required whenever more than five staff are expected on site at a time):		
Name:	Title:	Signature:

Owner's Staff/Other Contractors will follow the GC/Constructors' established health and safety rules on the project site at all times, including following the identified sign-in process whenever attending the project site.

Owner's Staff/Other Contractors Project Constructor Coordination Form

PART B: To be completed by the General Contractor and Region of Peel Project Manager

Communication and Site Responsibility - This coordination document must be completed and signed by the GC and the ROP Project Manager. It is intended to assist everyone involved to understand who will be working on the project site on behalf of the Region of Peel, when the work will take place, and that the Constructor designation and site responsibility will be maintained by the GC identified within this document while this work is being completed.

By signing you acknowledge commitment to the roles and responsibilities as described in this coordination document.

Peel Region Project Manager:		
Name:	Title:	Signature:
		Date:
GC Representative:		
Representative Name:	Title:	Signature:
		Date:

PART C: To be completed by Site Constructor/General Contractor at the time of orientation

The general contractor/constructor will ensure that prior to entering the project site the following items have been reviewed with the Owner's Staff/Other Contractors:

Activity	Completed	Date	Activity	Completed	Date
Owner's Staff/Other Contractors have received orientation on project site and constructor emergency process has been reviewed.	<input type="checkbox"/>		Hazard assessment of ROP work area on site has been conducted along with review of potential electrical hazards, physical hazards, chemical, etc.	<input type="checkbox"/>	
Protective equipment has been provided to Owner's staff/ Other Contractors.	<input type="checkbox"/>		Additional hazards or risks have been identified in site work area (list below).	<input type="checkbox"/>	
Comments:					
Project Site Supervisor/Contact(s): <i>Identify Contractor Representative to supervise Owner's Staff/Other Contractors while on site to perform work.</i>					
GC Representative:	Title:	Signature:			

Copies of the completed document must be provided to the construction project manager for distribution to the employee's direct supervisor. Original to be maintained by the general contractor at the construction site.

Owner's Staff/Other Contractors Anticipated to Attend Site for Contractor Coordination

Owner's staff/Other contractors' information (i.e. ISTS staff or XYZ Vendor)	Description of work	Anticipated stage of construction and duration of work

RELEASE AT SUBSTANTIAL PERFORMANCE OF THE WORK

Owner: _____ **Date:** _____
Contractor: _____
Document No.: _____
Project: _____
Applicable Invoice: _____

Context

- A. The Contractor identified above (the “**Contractor**”) and the Regional Municipality of Peel entity, government, agency, or board identified above as the Owner (the “**Owner**”) entered into a contract dated (the “**Contract**”) pursuant to the procurement document number identified above for the Contractor to provide certain work and services in respect of the project identified above (the “**Project**”).
- B. Capitalized terms used but not defined in this Release have the meanings given to them in the Agreement.
- C. Pursuant to the Contract, the Contractor is providing this Release to the Owner in support of its application for payment of holdback upon Substantial Performance of the Work.

Release

1. Except for the claims set out in Section 2, as of the date set out above, the Contractor on its own behalf and on behalf of its successors and assigns hereby irrevocably waives, releases, and forever discharges the Owner and its directors, officers, Regional council members, representatives, employees, contractors, agents, and their respective successors and assigns (the “**Released Group**”) from any and all claims, changes, disputes, complaints, liabilities, obligations, damages, actions, causes of action, proceedings, debts, demands, losses, and expenses whatsoever, at law and in equity, which it may have had, may now have, or may have arising out of or in connection with the Contract (“**Claims**”).
2. The Contractor does not release the Released Group from the following Claims:
 - a. Claims for any sums retained by the Owner for the Warranty Holdback;
 - b. Claims arising from Work which remains to be completed by the Contractor on the Project as at the date of this Release;
 - c. Claims which cannot be waived under the *Construction Act* (Ontario); and
 - d. the following Claims (including any outstanding Claims about which the Contractor has previously notified the Owner and attach additional page if necessary):

The Contractor acknowledges and agrees that if it leaves Section d blank or responds “none” in Section 2.d, the Contractor is deemed not to have reserved any Claims other than those in Sections 2.a, 2.b, and 2.c.

3. Except for the Claims set out in Section 2.d, Contractor’s managerial or senior supervisory personnel do not know, or have reason to know based on good and prudent industry practices, of any potential or actual claims that are required to be notified to Owner according to the requirements of the Contract as of the date of this Release.

4. This Release is freely and voluntarily given and the Contractor acknowledges and represents that it has fully reviewed the terms and conditions of this Release and that it is fully informed with respect to the legal effect of this Release.

General

5. No provision of this Release which may be deemed unenforceable shall in any way invalidate any other provision hereof, all of which shall remain in full force and effect.

6. This Release shall be binding upon, and shall inure to the benefit of, the Contractor, the Owner, and their respective heirs, successors, legal representatives and assigns.

7. This Release and the Contract constitute the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous agreements. No change or waiver shall be valid unless in writing and signed by an authorized representative of the party against whom such change or waiver is sought to be enforced.

8. This Release may be executed and delivered electronically.

9. This Release is governed by the laws of Ontario and the federal laws of Canada applicable therein. Any dispute arising out of this Release shall be governed by the terms of the Contract.

**[INSERT FULL CORPORATE NAME OF
CONTRACTOR]**

By: _____
Name:
Title:

I have authority to bind the corporation.



**2020-546P - CONSTRUCTION SERVICES FOR LOCALIZED
INTERIOR RENOVATIONS AT VARIOUS LONG-TERM CARE
FACILITIES WITHIN THE REGION OF PEEL**

Date Issued: July 10, 2020 12:00 PM

Schedule of Prices

*Denotes a "MANDATORY" field

Do not enter \$0.00 dollars unless you are providing the line item at zero dollars to the Owner.

If the line item and/or table is "NON-MANDATORY" and you are not bidding on it, leave the table and/or line item blank. Do not enter a \$0.00 dollar value.

Pricing Breakdown of Stipulated Contract Price for Document 2020-546P - Malton Village - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel

Prices are all inclusive of the cost of labour, materials and equipment required to complete the Work as specified in the Contract Documents, including but not limited to all applicable taxes, overheads, profits and all other associated Bidder expenses.

The Prices include fully for all increases, for whatever cause, in cost or price of labour, materials, products, equipment, or consumables. Escalation shall not apply for the duration of the Contract. The Prices below include the payment of permits as described in the Supplementary Conditions, and the Cash Allowances.

No allowances or extra consideration on behalf of the successful Vendor will be allowed by the Owner by reason of additional costs, damages or other difficulties incurred by the successful Vendor for failure to have fully investigated and determined conditions affecting the Work.

The Bidder shall complete the pricing table below in its entirety. The Total Stipulated Contract Price shall be the sum of all Total Item Prices. The Agency reserves the right to calculate all prices and adjust totals where there are errors or omissions in extensions, additions or computations in the Total Stipulated Contract Price.

Line Item	Description	Unit	Quantity	Price *	Total
1	Mobilization	Lump Sum	1		
2	Demolition	Lump Sum	1		
3	Scope 1: Closet Doors Replacement	Lump Sum	1		
4	Scope 1: Washroom Door Repairs	Lump Sum	1		
5	Scope 2: Staff Room Renovation	Lump Sum	1		
6	Scope 3: Kitchen Flooring & Temporary Kitchen Facilities (Not Including Trailer Rentals)	Lump Sum	1		
7	Scope 4: Sidewalks at Five Exit Ramps	Lump Sum	1		
8	Infection Control	Lump Sum	1		
9	Commissioning	Lump Sum	1		
10	Cleaning	Lump Sum	1		
11	Close-Outs	Lump Sum	1		
Subtotal:					

Pricing Breakdown of Stipulated Contract Price for Document 2020-546P -Tall Pines - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel

Prices are all inclusive of the cost of labour, materials and equipment required to complete the Work as specified in the Contract Documents, including but not limited to all applicable taxes, overheads, profits and all other associated Bidder expenses.

The Prices include fully for all increases, for whatever cause, in cost or price of labour, materials, products, equipment, or consumables. Escalation shall not apply for the duration of the Contract. The Prices below include the payment of permits as described in the Supplementary Conditions, and the Cash Allowances.

No allowances or extra consideration on behalf of the successful Vendor will be allowed by the Owner by reason of additional costs, damages or other difficulties incurred by the successful Vendor for failure to have fully investigated and determined conditions affecting the Work.

The Bidder shall complete the pricing table below in its entirety. The Total Stipulated Contract Price shall be the sum of all Total Item Prices. The Agency reserves the right to calculate all prices and adjust totals where there are errors or omissions in extensions, additions or computations in the Total Stipulated Contract Price.

Line Item	Description	Unit	Quantity	Price *	Total
1	Mobilization	Lump Sum	1		
2	Demolition	Lump Sum	1		
3	Scope 5: Closet Doors Replacement	Lump Sum	1		
4	Scope 5: Washroom Doors Repairs	Lump Sum	1		
5	Scope 6: Flooring	Lump Sum	1		
6	Infection Control	Lump Sum	1		
7	Commissioning	Lump Sum	1		
8	Cleaning	Lump Sum	1		
9	Close-Outs	Lump Sum	1		
Subtotal:					

Pricing Breakdown of Stipulated Contract Price for Document 2020-546P - Sheridan Villa - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel

Prices are all inclusive of the cost of labour, materials and equipment required to complete the Work as specified in the Contract Documents, including but not limited to all applicable taxes, overheads, profits and all other associated Bidder expenses.

The Prices include fully for all increases, for whatever cause, in cost or price of labour, materials, products, equipment, or consumables. Escalation shall not apply for the duration of the Contract. The Prices below include the payment of permits as described in the Supplementary Conditions, and the Cash Allowances.

No allowances or extra consideration on behalf of the successful Vendor will be allowed by the Owner by reason of additional costs, damages or other difficulties incurred by the successful Vendor for failure to have fully investigated and determined conditions affecting the Work.

The Bidder shall complete the pricing table below in its entirety. The Total Stipulated Contract Price shall be the sum of all Total Item Prices. The Agency reserves the right to calculate all prices and adjust totals where there are errors or omissions in extensions, additions or computations in the Total Stipulated Contract Price.

Line Item	Description	Unit	Quantity	Price *	Total
1	Mobilization	Lump Sum	1		
2	Demolition	Lump Sum	1		
3	Scope 7: Flooring for Serveries	Lump Sum	1		
4	Infection Control	Lump Sum	1		
5	Commissioning	Lump Sum	1		
6	Cleaning	Lump Sum	1		
7	Close-Outs	Lump Sum	1		
Subtotal:					

Cash Allowance - Malton Village

Line Item	Description	Unit	Lump Sum Price	Total
1	Contingency Allowance – Washroom Door Hardware Repairs additional to the scope of work in this document	Lump Sum	\$15,000.0000	\$ 15,000.00
2	Cash Allowance – Rental of Temporary Kitchen Trailer	Lump Sum	\$25,000.0000	\$ 25,000.00
3	Cash Allowance – Drywall Repairs	Lump Sum	\$5,000.0000	\$ 5,000.00
Subtotal:				\$ 45,000.00

Contingency Allowance - Malton Village

Line Item	Description	Unit	Lump Sum Price	Total
1	Contingency Allowance	Lump Sum	\$5,000.0000	\$ 5,000.00
Subtotal:				\$ 5,000.00

Cash Allowance - Tall Pines

Line Item	Description	Unit	Lump Sum Price	Total
1	Cash Allowance – Washroom Door Repairs additional to the scope of work in this document	Lump Sum	\$15,000.0000	\$ 15,000.00
2	Cash Allowance Drywall Repairs	Lump Sum	\$5,000.0000	\$ 5,000.00
			Subtotal:	\$ 20,000.00

Contingency Allowance - Tall Pines

Line Item	Description	Unit	Lump Sum Price	Total
1	Contingency Allowance	Lump Sum	\$5,000.0000	\$ 5,000.00
			Subtotal:	\$ 5,000.00

Cash Allowance - Sheridan Villa

Line Item	Description	Unit	Lump Sum Price	Total
1	Cash Allowance – Owners testing	Lump Sum	\$2,000.0000	\$ 2,000.00
			Subtotal:	\$ 2,000.00

Contingency Allowance - Sheridan Villa

Line Item	Description	Unit	Lump Sum Price	Total
1	Contingency Allowance	Lump Sum	\$2,000.0000	\$ 2,000.00
			Subtotal:	\$ 2,000.00

Separate Prices - Sheridan Villa

Separate prices are for work which may be added to, deducted from, or substituted for work included in the Proposal Price.

The following prices are for items listed hereunder. The Agency may, at its sole discretion, accept or reject any or all prices stated, add or deduct from the work described and adjust the Stipulated Contract Price by the stated amount(s).

Prices are all inclusive of the costs of labour, materials, equipment, overhead, profit and other related charges including all duties and taxes except HST.

The following work items and amounts are **not** included in the Stipulated Contract Price.

Line Item	Description	Unit Price
1	For Scope 7: Cost to add one electrical outlet in each North Servery.	
2	For Scope 7: Cost to replace Servery counter backsplash; to match existing.	

Separate Prices - Malton Village and Tall Pines

Separate prices are for work which may be added to, deducted from, or substituted for work included in the Proposal Price.

The following prices are for items listed hereunder. The Agency may, at its sole discretion, accept or reject any or all prices stated, add or deduct from the work described and adjust the Stipulated Contract Price by the stated amount(s).

Prices are all inclusive of the costs of labour, materials, equipment, overhead, profit and other related charges including all duties and taxes except HST.

The following work items and amounts are **not** included in the Stipulated Contract Price.

Line Item	Description	Unit Price
1	For Scope 1 and Scope 5 Door Repairs: Provide installation / mock-up of one existing washroom door including replacement of existing top track and hardware with new track and soft-close sliding door hardware, as specified.	
2	For Scope 1 and Scope 5 Door Repairs: Cost per washroom door to replace existing top track and sliding door hardware with new top track and soft-close sliding door hardware as specified. Include all associated labour, materials, overhead and profit.	
3	For Scope 1 and Scope 5: Cost to supply soft-close sliding door hardware as specified.	

Fee for changes in the work

The following rates and percentage Price Adjustments shall be used if applicable for any approved changes to the work, in accordance with the General Conditions.

Labour: The following schedule of rates are all-inclusive Straight Time and Overtime hourly rates (blended for foreman, journeyman, apprentice) which includes the cost of vacation and statutory holiday pay, burdens, benefits, home office administration and overhead, supervision, and all other indirect costs, overhead and profit. Rates exclude only HST.

Material: The percentage mark-up on Material is five per cent. Material costs shall be calculated using the actual invoiced cost to successful Vendor plus cost of transportation.

Equipment (Third Party): Rental equipment from arms-length third parties shall be reimbursed at invoiced cost plus five per cent. Reimbursement for transportation is at cost if the equipment is not on site.

Contractor’s Subcontractors (Third Party, Arms-Length):

.1 The percentage to be added to the invoiced cost of extra work completed by a Subcontractor to the successful Vendor is five per cent. Included in this percentage is the applicable compensation to cover the successful Vendor’s supervision, overhead, profit and all other Costs.

.2 The percentage mark-ups, used by the successful Vendor’s Subcontractors shall not exceed successful Vendor’s mark-up rate specified above, unless prior written authorization has been given by the Owner.

Included in overhead and profit are the successful Vendor's, and Subcontractor's, incidental costs including bonding and health and safety.

Line Item	Description	Straight time per hour *	Overtime Rate Per Hour *
1	Superintendent/Foreman (Hourly labour rate including all contractor charges, labour burdens, statutory charges, job expenses, small tools, field supervision, office supervision, overhead and profit.)		
2	Journeyman Carpenter (Hourly labour rate including all contractor charges, labour burdens, statutory charges, job expenses, small tools, field supervision, office supervision, overhead and profit.)		
3	Apprentice Carpenter (Hourly labour rate including all contractor charges, labour burdens, statutory charges, job expenses, small tools, field supervision, office supervision, overhead and profit.)		
4	Licensed Electrician (Hourly labour rate including all contractor charges, labour burdens, statutory charges, job expenses, small tools, field supervision, office supervision, overhead and profit.)		
5	Licensed Plumber (Hourly labour rate including all contractor charges, labour burdens, statutory charges, job expenses, small tools, field supervision, office supervision, overhead and profit.)		

Unit Price for Changes to Scope of Work

Unit Prices include supply and installation unless otherwise indicated and shall be based on work specified in Contract Documents. **Unit Prices shall apply only in cases of changes to scope of work.**

Unit Prices are all inclusive of the costs of labour, materials, equipment, overhead, profit and other related charges including all

duties and taxes except HST.

The Agency shall compensate the successful Vendor at no greater rate than 20 per cent of the lesser of the unit costs provided for extra and removal. For example, if the unit price quoted for removal is \$10 per m²; the Agency will compensate the successful Vendor no more than \$12 per m² for the same item if it was approved as extra to the contract.

Line Item	Description	Unit	Extra	Removal
1	Scope 1 and Scope 5: Cost per washroom door to remove door, lubricate, and clean ball bearing assembly, and re-install.	Per Washroom		
2	Scope 1 and Scope 5: Cost per closet to replace existing door complete with all hardware and top track with new doors and hardware as detailed and specified.	Per Closet Door		
3	Scope 1 and Scope 5: Cost to supply only the hardware package for one closet door installation.	Per Closet Door		
4	Scope 6: Cost for additional square feet of polyurethane flooring and waterproof membrane. Include floor preparation, material, and installation.	m2		
5	Scopes 2, 3, 6+7: Cost to supply and install new floor drain top to suit new floor.	Each		
6	Scopes 2, 3, 6+7: Cost to supply and install new funnel floor drain top to suit new floor.	Each		
7	Scopes 2, 3, 6+7: Cost to supply and install new floor cleanout top to suit new floor.	Each		
8	Scopes 2, 3, 6+7: Cost to remove, supply and install existing floor drain with new. Include cost for removal of existing, reconnection of sanitary, trap, vent + prime and floor repair.	Each		
9	Scopes 2, 3, 6+7: Cost to remove, supply and install existing floor funnel drain with new. Include cost for removal of existing, reconnection of sanitary, trap, vent + prime and floor repair.	Each		
10	Scopes 2, 3, 6+7: Cost to remove, supply and install existing cleanout with new. Include cost for removal of existing, all connections and floor repair.	Each		
11	Gypsum Board Wall- finished one side, taped, sanded and skimmed	m2		

12	Gypsum Board Ceiling - taped, sanded and skimmed	m2		
13	Paint to walls	m2		
14	Scopes 1 & 2: Provide unit price to replace any damaged washroom doors with new solid core wood door, birch veneer, with clear varnish finish (including routed bottom), removal and re-install of existing handle at the top track hardware; removal and install of existing bumper (if applicable). Size of door approximately 48" x 72" (site measure to confirm size).	Per Washroom Door		
15	For Scope 1 and Scope 5 Door Repairs: Cost per washroom door to replace existing top track and sliding door hardware with new equivalent top track and sliding door hardware. Include all associated labour, materials, overhead and profit.	Per Washroom Door		

Itemized Prices

Itemized price breakdown of the cost for each piece of equipment specified. Prices are all inclusive of the costs of labour, materials, equipment, overhead, profit transportation, delivery, un-crating and setting into place and other related charges including all duties and taxes except the HST.

List the item number, name and quantity of each item together with the manufactures name and model number.

Line Item	Description - Equipment Category	Item Number *	Manufacturer Name *	Model Number *	Qty	Unit Price *
1	Item 1.015 - Exhaust Hood				1	
2	Item 1.017 - Exhaust Hood				1	
3	Item 2.000 - Floor Drain				1	
4	2.001 - Kettle, electric				1	
5	2.002 - Soup Retherm Unit				6	

Summary Table

Bid Form	Amount
Pricing Breakdown of Stipulated Contract Price for Document 2020-546P - Malton Village - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel	
Pricing Breakdown of Stipulated Contract Price for Document 2020-546P - Tall Pines - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel	
Pricing Breakdown of Stipulated Contract Price for Document 2020-546P - Sheridan Villa - Construction Services for Localized Interior Renovations at Various Long-Term Care Facilities Within the Region of Peel	
Cash Allowance - Malton Village	\$ 45,000.00
Contingency Allowance - Malton Village	\$ 5,000.00
Cash Allowance - Tall Pines	\$ 20,000.00
Contingency Allowance - Tall Pines	\$ 5,000.00
Cash Allowance - Sheridan Villa	\$ 2,000.00
Contingency Allowance - Sheridan Villa	\$ 2,000.00
Grand Total (exclusive of taxes):	

Bid Questions

Please provide in the space below your GST/HST Registration Number. Please note that all invoices provided to the Agency must show the GST/HST Registration Number and show this tax on a separate line.

Specifications

CONTACT INFORMATION

In the space provided please list the contact names and numbers during the times indicated below.

Line Item	Description	Regular Hours Service (7:00 a.m. - 5:00 p.m.) *	After Hours Service (5:00 p.m. - 7:00 a.m.) *	Saturdays, Sundays and Holidays *
1	Name			
2	Phone Number			
3	Cell Number			
4	Email Address			

Documents

It is your responsibility to make sure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Call Document may be rejected.

It is your responsibility to make sure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Call Document may be rejected. Bidders are required to provide only electronic responses. Failure to respond to any of the Requested for Information items specified in the RFP Document will be deemed as unresponsive and subsequently no points will be assigned during the evaluation process. Information provided by the Bidder will only be used for the sole purpose of determining the Bidder's experience and

qualifications. Information submitted is subject to verification, and further pertinent information may be obtained from references.

- 1.3 Company Profile - 1.3.1 Explain in detail your Organization's philosophy, background and areas of expertise. * (mandatory)
- 1.3 Company Profile - 1.3.2 Provide details of your firm's Quality Management program. * (mandatory)
- 1.3 Company Profile - 1.3.3 Provide details of your firm's Health and Safety program. * (mandatory)
- 1.3 Company Profile - 1.3.4 Provide information on the annual value of work for years 2010 to 2019. * (mandatory)
- 1.4 Experience Leading Similar Projects - Item 1.4.1 to 1.4.3 * (mandatory)
- 1.5 Project Team and Experience - Item 1.5.1 * (mandatory)
- 1.5 Project Team and Experience - Item 1.5.2 to 1.5.3 * (mandatory)
- 1.5 Project Team and Experience - Item 1.5.4 * (mandatory)
- 1.6 Proposed Work Plan - Item 1.6.1 to 1.6.4 * (mandatory)
- 1.6 Proposed Work Plan - Item 1.6.5 * (mandatory)

BONDING UPLOAD SECTION

- Agreement to Bond * (mandatory)
- Digital Bid Bond * (mandatory)

Declarations & Addenda

This Bidder Submission is made entirely in accordance with the Document. By completing the information below and by submitting an online response to the Document, it is deemed that the Bidder has read and agreed to abide by all of the terms and conditions contained in the Document. and that you have the authority to bind the Bidder and submit this Bidder Submission on behalf of the Bidder.

I acknowledge in my acceptance of the terms and conditions below the following requirements for Accessibility for Ontarians with Disabilities, [Health & Safety Compliance Certificate & Appendix A](#) and [Code of Conduct](#):

Contracted employees, third party employees, agents and others who deal with members of the public on behalf of the Region of Peel or participate in the development of policies, practices and procedures governing the provision of goods or services to members of the public must meet the requirements of the Accessibility for Ontarians with Disabilities Act 2005 and its Regulations with regard to training and the provision of goods or services to persons with disabilities. A document describing the training policy, a summary of the contents of the training and details of training dates and attendees must be submitted to the Region of Peel upon request. If a training policy is not yet in place, complete the training module at the following website: accessforward.ca.

I/WE agree to be bound by the terms and conditions in the Document and have authority to bind the Bidder and submit this Bidder Submission on behalf of the Bidder.

The bidder shall declare any potential conflict of interest as defined in the Standard Terms and Conditions that could arise from submitting a bidder submission for this document. Do you have a potential conflict of interest?

Yes **No**

The Bidder acknowledges and agrees that the addendum/addenda below form part of the Bid Document

Please check the box in the column "**I have reviewed this addendum**" below to acknowledge each of the addenda.

File Name	I have reviewed the below addendum and attachments (if applicable)	Pages
There have not been any addenda issued for this bid.		