CONTRACT NO. 2009-20c
CITY OF PORT COLBORNE
76 Main Street
OLD HUMBERSTONE
BUILDING RENOVATION

MAYOR: Vance Badawey
DIRECTOR: Ron Hanson, C.E.T.
CITY CLERK: Janet Beckett

CLOSING DATE: Tuesday, November 24, 2009, at 2:00:00 p.m. Local Time

Prepared by:
Quartek Group Inc.
Engineers, Architects, Project Managers
Main Office:
360 York Road
Niagara-on-the-Lake, ON
L3K 4H4
P 905 984 8676
F 905 682 5896
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1 Instructions To Bidders

1.1 GENERAL DESCRIPTION OF WORK
.1 Work to be carried out under this contract includes but may not be limited to interior renovations to the Old Humberstone Building in Port Colborne. The existing washrooms and kitchen area are to be completely removed and replaced with new barrier free compliant washrooms. The main hall space is to have new floor and ceiling finishes installed as well as new lighting and power upgrades. An addition to the building constructed in 1955 is to be completely demolished. The existing boiler, hot water, air conditioning and power service panels are to be relocated to a new utility room adjacent to the new barrier free washrooms in the remaining building.

1.2 BIDDERS
.1 General Contractors are invited to submit a bid. Subcontractors for other trades proposed by the bidder shall be recognized firms skilled in their particular trades.

1.3 FORM OF AGREEMENT
.1 The form of agreement shall be the CCDC2 2008 (Stipulated Price Contract) including the General Conditions, subject to the amendments referred to in the "Supplementary General Conditions" (00500), and inclusive of all Technical Specifications and Drawings.

1.4 USE OF DOCUMENTS & SITE ACCESS DURING TENDER, EXAMINATION OF PLANS, SPECIFICATIONS
.1 Drawing plans and specifications are available at Quartek Group Inc. Bidders shall carefully examine and study all of the contract documents and the site of the work in order to satisfy themselves by examination as to all conditions affecting the contract and as to the detailed requirements of the construction.

.2 A mandatory inspection of the site has been scheduled for:

- Tuesday, November 10, 2009, 2:00 P.M.
- Tuesday November 17, 2009, 10:00 a.m.

for the general information of all bidders.
All interested parties shall meet at Humberstone, 76 Main St., Port Colborne. Tenders will not be accepted from contractors who fail to attend the scheduled mandatory site inspection. All bidders are encouraged to arrange for the attendance at this inspection of any key sub-trades.

For more information, contact:

Mr. Nigel Scott, OAA
Quartek Group Inc. Architects, Engineers
T (905) 984-8676  F (905) 682-5896
nscott@quartekgroup.com

1.5 BID CALL
.1 All tenders must be sealed and submitted to:
Janet Beckett, City Clerk on the First Floor, City Hall
City of Port Colborne
66 Charlotte Street
Port Colborne, Ontario L3K 3C

.2 By the following time: 2:00:00 p.m. local time on Tuesday, November 24, 2009.

.3 Tenders received later than the time specified will not be accepted, regardless of the postal seal date. Tenders received after this time will be unopened and destroyed or returned
unopened.

.4 Tenders must be plainly marked to reveal the contents and the Tenderer's name and address.

.5 Bids will be opened publicly the same day that tenders close at 2:15 p.m. local time, Tuesday, November 24, 2009, in Committee Room #2, Second Floor, City Hall. Contractors who have submitted a bid are welcome to attend.

1.6 BID SUBMISSIONS

.1 Bidders shall be solely responsible for the delivery of their bids in the manner and time described.

.2 Bids shall be sealed and submitted in two envelopes to:

Janet Beckett, City Clerk on the First Floor, City Hall
City of Port Colborne
66 Charlotte Street
Port Colborne, Ontario L3K 3C8

.3 Tenders shall be delivered in two (2) sealed, opaque envelopes clearly marked as to their contents.

.4 Envelope One to contain:

.1 "Agreement to Bond", duly signed and sealed (no copies or facsimiles will be accepted).

.2 Bid Bond in the form of a certified cheque, money order, or an irrevocable letter of credit in the amount of

Fifteen Thousand Dollars $15,000.00

.5 Envelope Two to contain:

.1 Form of Tender (including addenda if applicable).

.2 Please note that the tender specifications shall not be included in the second envelope. In the event the first envelope does not contain the proper documents, the second envelope will not by opened.

.6 Improperly completed information, irregularities in security deposit, may be cause not to open the bid envelope and declare the bid invalid or informal.

1.7 BID SECURITY

.1 Bids shall be accompanied by a Bid Security as follows:

.1 Bid Bond in the amount of

Fifteen Thousand Dollars ($15,000)

.2 Endorse the Bid Bond in the name of City of Port Colborne as obligee, signed and sealed by the Principal (Contractor) and Surety.

.3 Shall indicate that this tender as submitted will remain in effect for sixty (60) days from the date of receipt of bids without alteration or cancellation.

1.8 AGREEMENT TO BOND

.1 Submit with the Bid Form and Bid Bond a Surety Consent that the Surety providing the Bid Bond is willing to supply the Performance and Labour and Materials Payment Bond, each in the amount of 100% (Renovation Work) of the Contract Price.

1.9 THE BID ACCEPTANCE PERIOD

.1 The Bid Acceptance Period is defined as a period of up to, and including, sixty (60) days, commencing at the Bid Closing Time, during which bids shall be irrevocable and open to acceptance by Owner.
1.10 COMPLETION OF BIDS

.1 Bids must be made on the Bid Form and Supplements provided. All blank spaces must be properly completed with legible entries.
.2 Bids which are incomplete, conditional, illegible or which contain entries not called for, erasures, alterations or irregularities of any kind, may be rejected as informal.
.3 Bids must be signed by a person duly authorized to execute a Contract in the name of the Contractor. Bids shall be supported by a resolution of the board of directors. Each page of the Bid Form and Supplements and any other attachments must be initialled by the said officer.
.4 The bidder's legal name and address must appear on the Bid.
.5 Prices for Contractor bonds which will be required during construction shall be shown separately in the Bid.
.6 The submission of a Bid constitutes acceptance of the Terms and Conditions of the Bid Documents. Once the date and time specified for receipt of Bids has been reached, Bids are irrevocable.
.7 The bidder shall not make news releases or issue other advertising pertaining to the Bid Documents without first obtaining the written approval of the Owner.

1.11 BID PRICE

.1 The bidder shall include in his Bid price, the cost to cover, but not limited to:
   .1 All labour, materials, equipment, tools and services necessary and incidental for the proper carrying out of the intent and meaning of the drawings and specifications.
   .2 All work specified in Addenda.
   .3 All permits, licenses and certificates, as required for the performance of the Work.
   .4 All government sales taxes, customs duties and excise taxes that are applicable. The price shall not include Federal Goods and Services Tax (GST), which will be calculated separately and paid with each invoice.
   .5 All bonds and insurance
   .6 All cash allowances, provisional items or provisional sums.
.2 The Bid price shall be considered firm and not subject to escalation.

1.12 SUBCONTRACTORS

.1 Bidders shall be responsible for the distribution of all of the Bid Document and Addenda thereto to all Subcontractors.
.2 No claims for payment will be entertained because of the failure of the Owner, Consultant, or their representatives to supply any Subcontractor or Supplier with all or part of the Bid Documents and Addenda thereto, which have been supplied to the bidders up to the time for submitting Bids.
.3 Bids shall include a list of the names of Subcontractors whose prices they have carried for the respective sub-trades defined in the Bid Form and Supplements.
.4 If the bidder intends to carry on partially or entirely the work of one section by his own forces, he shall write, "By Own Forces", opposite the name of each section.
.5 The successful bidder shall not change the firms listed without written consent of the Consultant and follow up with confirmation of revised Subcontractor.

1.13 EQUIVALENTS AND ALTERNATIVES

.1 Bids shall be made and will be evaluated on the products and materials specified
.2 If the bidder wishes to offer alternatives where such alternatives would be advantageous to the Owner, he may do so. A comprehensive description of the alternative must be submitted with the Bid on statement "D" Alternative Price, presented in a format which evaluates the differences or equivalencies with the specified item. Where acceptance of the alternative would involve a change in price, such change(s) shall be given as separate amount(s).
1.14 CASH ALLOWANCE

.1 Include the following Cash Allowances in the Stipulated Price. The Cash Allowances shall include any sum for expenses and profit. P.S.T. and G.S.T. must be added as applicable.

.1 2 Wood Windows and 2 Wood Exterior Doors & Frames (Supply Only) $11,000
.2 Furniture & Equipment not shown on Drawings $50,000

1.15 CONTINGENCY ALLOWANCE

.1 The Contractor shall include in his contract a 'Contingency Allowance' in the amount of $30,000, which shall be disbursed, credited, and or reconciled by the Architect by means of a change order and only with the Owner's authorization.

1.16 CLARIFICATION

.1 Should a bidder find discrepancies in, or omissions from, the tender documents, or should he be in doubt as to their meaning, he shall clarify them with the Consultant who may send an addendum to all bidders. The Consultant will make no oral explanation or interpretation.

.2 Examine the Bid Documents upon receipt. The bidder shall immediately bring to the attention of the Consultant any omissions, ambiguities and discrepancies in the Documents, Drawings or Specifications.

.3 Failure to notify the Consultant during the Bid period shall mean acceptance of the Consultant's decision as to the proper interpretation at the time of construction.

.4 Any required clarifications will be issued to all bidders as an Addendum.

.5 Insert, in the space provided in the Bid Form, the numbers of all Addenda received during the Bid period, including any bound into the Bid Documents. If no Addenda have been received, insert the word "NONE" in the space provided.

.6 Neither the Owner nor the Consultant shall be responsible for any verbal instructions.

1.17 ALTERNATIVE

.1 For items listed in the 'Alternative Prices' Schedule in the Tender Form, the Bidder shall provide separate prices (in addition to the base price) describing each requested price as a reduction or addition to the base price. The prices shall include all materials, labour, profit and overhead related to this item, except the G.S.T.

1.18 ADDENDA

.1 Addenda will only be issued to Contractors registered with the Consultant at the mandatory site visit. Clarifications requested by bidders must be in writing not less than two (2) days before date set for receipt of bids in order to be properly addressed prior to the tender close.

Please address all requests/queries to:
Mr. Nigel Scott, OAA
Quartek Group Inc. Architects, Engineers
T (905) 984-8676 F (905) 682-5896
nscott@quartekgroup.com

.2 Reply will be made in the form of addendum.

1.19 EXISTING CONDITIONS

.1 The bidder shall visit the site before submitting the Bid in order to thoroughly acquaint himself with all local conditions under which he will be called upon to carry out the Work.

.2 In submitting his Bid, the bidder acknowledges that he has satisfied himself as to the nature and location of the Work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labour, water, electric power, roads, physical conditions at the site, ground conditions and contours and the
character of equipment and facilities needed during the prosecution of the work.

.3 The Owner or the Consultant shall in no way be held responsible for any loss, damage, injury (including death) to the persons and property of bidders' representatives from any cause whatsoever during any visit to the site.

1.20 LAWS & REGULATIONS

.1 The bidders shall make themselves fully acquainted with the laws, ordinances, rules, regulations and codes of local or other authorities having jurisdiction.

.2 During construction, all requirements of the latest revision of the Ontario OHSA shall be adhered to. The Contractor and all Subcontractors shall conform to the Ontario OHSA with regard to the Workplace Hazardous Materials Information System (WHMIS) Regulation. Particular attention is drawn to OHSA Regulation 213/91 pertaining to scaffolding and work platforms. The Contractor shall ensure that the proposed construction scheme conforms to OHSA and is acceptable to the Ministry of Labour.

1.21 AWARD OF CONTRACT

.1 Bid analysis and evaluation:

.1 The Owner reserves the right to reject any or all Bids, including without limitation the lowest Bid, and to award the Contract to whomever the Owner in its sole and absolute discretion deems appropriate and in the best interests of the Owner notwithstanding any custom of the trade to the contrary.

.1 While bids may only be submitted by a Bidder registered with the Architect a company's prequalification signifies only that it has met the Owner's minimum qualification requirements for the Project, and not necessarily mean that it is on equal footing with other prequalified Bidders with regard to bid analysis and evaluation.

.2 The Owner reserves the right to include for consideration, and may award the Contract to a Bidder submitting, a bid that is substantially compliant with the terms and conditions of the Bid Documents. Bids that are non-compliant will not be considered by the Owner. Bids containing errors or omissions not listed under paragraph 1.20.1.4 may be declared substantially compliant.

.3 Any other requirements for bid submission as described by the various Bid Documents notwithstanding, bids will be evaluated on the basis of the bid price and whatever alternative prices with which the Owner, in its sole and absolute discretion, may elect to proceed.

.4 Bids containing the following errors or omissions, in no particular order, may be declared non-compliant:

.1 Bid received after the Bid Closing Time (bids will be returned unopened).

.2 Bid not received in hard copy at the location prescribed for the receipt of bids by the Bid Documents.

.3 Bid received by fax, by email, or by any other electronic means.

.4 Bid not submitted in sealed envelope (whether envelope was provided by Owner or Bidder).

.5 Bid does not include bid bond in form and amount prescribed by the Bid Documents.

.6 Bid does not contain agreement to bond in form and amount prescribed by the Bid Documents.

.7 Bid where evidence of collusion, intent to defraud, or illegal practices on the part of a Bidder presented or discovered.

.8 Bid has been qualified by any condition other than those prescribed by the Bid Documents.

.9 Section 00413 Stipulated Price Bid Form is omitted or incomplete.

.10 Section 00413 Stipulated Price Bid Form is not dated, unsigned, not sealed, illegible, obscure, or contains erasures or alterations not called for.

.11 Section 00413 Stipulated Price Bid Form does not contain
.12 Section 00413 Alternative Prices Bid Form Supplement omitted or incomplete.

.13 Section 00413 List of Subcontractors Bid Form Supplement incomplete or omitted.

.2 Contract Award

.1 Delivery by registered mail or common carrier to the address given by the Bidder in its bid on Section 00413, of notification of award of the Contract to the Bidder by the Owner shall constitute acceptance of said bid and notice of award of the Contract by the Owner to the Bidder to the extent described by the notice of conditional award.

.2 It is intended that a Contract will be awarded within the Bid Acceptance Period Contract Documents will be prepared for signature immediately following Contract approval and are to be signed within two weeks of Contract award. Contractor's organization and mobilization at the Place of the Work may be permitted prior to signing of Contract.

.3 If the Bidder has not been so notified within the Bid Acceptance Period, the Bidder may, unless Bidder has otherwise agreed or offered and except as otherwise provided herein, withdraw its bid without penalty, forfeit, or obligation to the Owner or any kind.

.4 The Bidder accepts and agrees that, upon receipt of the notice of award of Contract, the Bidder will comply with the conditions stipulated by the notice of award of Contract, sign the Contract in triplicate, and return the Contract to the Owner within 7 days after being so notified.

.5 The Bidder accepts and agrees that, upon fulfillment to the satisfaction of the Owner of the above noted requirements, and any other conditions described by the notice of award, the Owner will provide written authorization to the Bidder to commence the Work and that, upon receipt of such authorization, the Bidder will commence the Work actively at the Place of the Work within 10 Working Days.

.6 The form of Contract shall be Canadian Standard Construction CCDC 2, 2008 as amended by Section 0073 03, “Supplementary General Conditions).

1.22 BONDS AND INSURANCE

.1 The Bidder shall submit to the Owner, within 7 days from the date of receipt of notice of conditional award of Contract, the performance and labour and material payment bond, each in amounts and in the forms described above.

.2 The Bidder shall submit to the Owner within 7 days from the date of receipt of notice of conditional award of Contract, proof that it has in place the various types of insurance as required by the Contract.

.3 Submission of the performance and labour and material payment bonds and proofs of insurance shall be a condition of the award of the Contract to the Contractor to the extent described in the notice of conditional award of Contract referenced above.

.4 Provide evidence that his workers are covered by the Workers’ Compensation Act and that he is in good standing thereof.

.5 Submit proof that:

.1 The Contractor and all Subcontractors have in place safety programs according to the requirements of the Occupational Health and Safety Act (OHSA).

.2 All employees of the Contractor and Subcontractors have received training in occupational safety in accordance with the requirements of the OHSA.

.3 Provide a detailed work schedule, indicating the timing of major activities and the delivery of materials.

.4 Perform the Work within the allowed time limit.

.6 Observe all Safety Rules and Regulations for Contractors as issued by the Owner.
1.23 BID INFORMATION & RESPONSIBILITY

.1 This Invitation to Bid and the information, specifications and documents provided herewith and in the course of communications (collectively, "the Bid Documents") with the Owner and/or the Consultant are only for preliminary reference of the bidder. Bidder acknowledges that Consultant is the advisor and consultant to the Owner only, and not to bidder.

.2 Consultant and its directors, officers, servants, employees and agents shall not be liable to the bidder for any claim, cause of action, damages or liability whatsoever ("Claims") relating to the Bid Documents and related communications or performance by Consultant in connection with the Invitation to Bid, whether or not the Claims be founded in tort, contract or otherwise (including but not limited to negligence, breach of warranty and strict liability).

.3 By acceptance and use of the Bid documents, bidder in consideration of the benefit received by it from provision of the bid documentation, hereby waives all claims, and agrees and covenants not to sue nor pursue any legal or other proceedings against the Consultant regarding the Bid documentation.

1.24 DATE OF COMMENCEMENT & PHASING

.1 The successful Bidder will be notified in writing by the Owner with a letter of intent for award of contract, no later than December 15, 2009, at which time the Bidder shall review scheduling and initiate preparation measures necessary to start work on site. The contractor, however, must submit the necessary certified copies of insurance policies in accordance with the contract requirements prior to any construction on site.

.2 All noisy work shall be carried out during the hours of 8 a.m. to 5 p.m. Monday to Friday. Weekends can be worked by the contractor at the discretion of the Owner. Co-ordinate with the Owner to gain access. Bidder shall prepare a work schedule indicating work plan, time and personnel on site for each day worked.

.3 Carry out all work as not to disturb or damage Owner property. Clean up immediately after any work.

.4 Phase 1 is expected to take place between December 15, 2009, & March 1, 2010. Phase 2 demolition is take place between March 7 and April 5, 2010.

1.25 DATE OF COMPLETION

.1 Time is of the essence for the Contract and it is important that the work be substantially completed by April 5, 2010, for commissioning and inspection and fully complete by April 19, 2010. If there is a delay in awarding the contract these dates will be prorated accordingly.

1.26 WORKPLACE SAFETY & INSURANCE

.1 The successful contractor will promptly make all returns and pay all assessments required or levied by the WSIB in the respect of the said work and persons employed on, or in the connection therewith and shall furnish to the Owner proof of good standing with the WSIB as part of the Contract Document requirement and will maintain that good standing throughout the contract period. A certificate of good standing will also be required upon final acceptance.

1.27 ORDINANCES, REGULATION, CODES PERMITS & INSPECTION

.1 A contractor is obligated to follow all regulations, ordinances, and codes governing the type of work undertaken on the job site. Any permits that are needed for the installation or construction of any work included under this contract, which are required by any authorities having jurisdiction or any relevant utilities, shall be obtained and paid for by the Contractor following whatever ordinances, regulations, and codes requiring the permits. If the authorities of the jurisdiction require inspection at said points of the installation, the Contractor shall arrange for, and be present at, any such inspections and give timely notice to the Consultant. The only exceptions shall be the application for a building permit, and any development charges that may apply.
(including Hydro development charges) in which case the submission and payment, shall be the responsibility of the Owner or their agent, whereas the contractor shall still arrange for, and be present at, any related inspections. Any additional work or furnishing of material required due to inspection by the authorities of the jurisdiction, shall be furnished by the Contractor at no cost to the Owner.

1.28 TAX IDENTIFICATION

.1 Tenders shall include all Provincial Sales Taxes. All tenders shall identify the GST as a separate quote on the Tender Form. The Owner may claim a rebate after the completion of the work. If necessary, the Contractor shall provide the Owner with additional cost detail.

1.29 INDEMNIFICATION

.1 Refer to Indemnification Clause in Section 00 73 03, "Supplementary Conditions - Stipulated Price" 1.22 GC 12.1 for specific requirements.

1.30 CONSULTANT

.1 All reference to the word "Consultant" or "Engineer" in any tender or contract documents is to be taken to mean:

Quartek Group Inc. Architects, Engineers, Planners and Project Managers
360 York Road, R.R.#4
Niagara-on-the-Lake, Ontario, L0S 1J0
Tel. (905) 984-8676
Fax. (905) 682-5896.

End of Section
General

1.1 FORM OF TENDER

Form of Tender
Section 00 41 13

City of Port Colborne
Janet Becket, City Clerk
66 Charlotte St. (First Floor)
Port Colborne, On L3K 3C8

To the City of Port Colborne:
We, the undersigned Contractor(s), have carefully examined the attached documents as herein listed and forming part of this Tender:
- Information to Bidders
- Specifications (as bound within)
- Contract Drawings (as noted)
and have carefully examined the site and location of the work to be executed under this Contract.

We, the undersigned Contractor(s), understand and accept the specifications, and, for the prices set forth in this Tender, hereby offer and agree to enter into an agreement with the City of Port Colborne (PC) to furnish all machinery, labour, tools, apparatus and other means of construction, carry out demolition and disposal of waste material, furnish all materials and to complete the work in strict accordance with the specifications referred to above for the total stipulated tender price of:

Material and Labour
(Base Price PST Inclusive) ______________________________________ Dollars
($ ______________________)

GST ______________________________________ Dollars
($ ______________________)

Total Cost ______________________________________ Dollars
($ ______________________)

________________________________________________________________________

Company Name                        Initial

Humberstone Building Renovation Quartek Group Inc. Project # 08024
Bid Form - Stipulated Price City of Port Colborne
City of Port Colborne

Page 1
We acknowledge that we have received Addendum/Addenda No* ____ to * ____ inclusive, and that all changes specified in the Addendum/Addenda have been included in the prices submitted. The contractor has attached the completed Unit Rate form which shall form part of the tender form.

We agree to commence work as specified to proceed continuously to the completion and to complete all the work by **April 19, 2010** (*        ) initial.

We agree that this tender is to continue open to acceptance and irrevocable until the formal contract has been executed by the successful bidder for the said work and that PC may, at any time, within **60 (sixty)** calendar days of closing date, accept this tender without notice, whether any tender has been previously accepted or not.

* to be filled in by Bidder.

OFFERED ON BEHALF
OF THE CONTRACTOR

Insert Workplace Safety
and Insurance Board
Account No.________

___________________________________________
Signature(s)

___________________________________________
Print Name(s)

___________________________________________
Company Name

___________________________________________
Address

___________________________________________
Contractor's Seal

___________________________________________
Witness Signature

___________________________________________
Date

___________________________________________
Print Witness Name

Note:

a) If the Tenderer is a Corporation, the Corporate seal must be affixed under the signature of a duly authorized officer or officers of the Corporation.

b) If the Tenderer is not a Corporation or a Partnership, the Tenderer must sign in the presence of a witness, who must also sign.

c) If the Tenderer is a Partnership, each member of the Partnership must sign in the presence of a witness, who must also sign.

__________________________  ____________
Company Name          Initial
**FORM OF TENDER - STATEMENT 'B'**

**LIST OF SUB-CONTRACTORS**

The above contractor agrees to carry the following sub-contractors in the contract as listed below without exception and agrees to advise PC of any proposed change in the list and, if awarded the contract shall obtain approval of such change prior to the commencement of any work before construction:

<table>
<thead>
<tr>
<th>Sub-Trade</th>
<th>Name of Sub-Contractor</th>
<th>Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td></td>
<td></td>
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<tr>
<td>Drywall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flooring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Painting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stonework</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FORM OF TENDER - STATEMENT 'C'**

**UNIT COST SCHEDULE**

The following are our Unit Prices for the Units of Work listed hereunder. The Unit Prices listed apply to additions and deletions from Work only during the time scheduled for such Work in the project schedule. Prices are inclusive of labour, products, expenses, overheads, profit and applicable taxes but do not include GST.

<table>
<thead>
<tr>
<th>Unit of Work</th>
<th>Unit Price Amt to Add</th>
<th>Unit Price Amt to Deduct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint new or existing surface</td>
<td>Sq.ft.</td>
<td>Sq.ft.</td>
</tr>
<tr>
<td>(Primer &amp; 2 coats)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FORM OF TENDER - STATEMENT 'D'**

**ALTERNATIVE PRICES**

We submit the following prices for consideration in lieu of the specified material, equipment or methods. All prices to include all taxes with the exception of GST.

<table>
<thead>
<tr>
<th>Specified Material Equip</th>
<th>Proposed Alternative</th>
<th>Amt to be Added/Deducted</th>
</tr>
</thead>
</table>

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**End of Section**
1. Supplements to the Contract Conditions

1.1 The Standard Construction Document for Stipulated Price Contract, 2008 English version, consisting of the Agreement Between Owner and Contractor, Definitions, and General Conditions of the Stipulated Price Contract, Parts 1 to 12 inclusive, governing same is hereby made part of these Contract Documents, with the following amendments, additions and modifications. Where these amendments, additions, and modifications specifically reference a change to the Agreement, Definitions, or General Conditions, these amendments, additions and modifications shall govern.

1.2 ARTICLE A-6 - RECEIPT AND ADDRESSES FOR NOTICES IN WRITING

Delete Article A-6.1 and substitute new article 6.1:

6.1 Notices in Writing between the parties or between them and the Consultant shall be considered to have been received by the addressee on the date of receipt if delivered by hand or by commercial courier or if sent during normal business hours by fax and addressed as set out below. Such Notices in Writing will be deemed to be received by the addressee on the next business day if sent by fax after normal business hours or if sent by overnight commercial courier. Such Notices in Writing will be deemed to be received by the addressee on the fifth Working Day following the date of mailing, if sent by pre-paid registered post, when addressed as set out below. An address for a party may be changed by Notice in Writing to the other party setting out the new address in accordance with this Article.

1.3 DEFINITIONS

Add the following definition:

19a. Submittals

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

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

1.4 GENERAL

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

1.5 GC 1.1 - CONTRACT DOCUMENTS

.1 Add to the end of subparagraph 1.1.2.2

 Except where the Consultant shall be indemnified as a third party beneficiary as provided in subparagraphs 9.2.7.4, 9.5.3.4 and in 12.1.3.

.2 Add new subparagraph 1.1.7.5:

1.1.7.5 In case of discrepancies, noted materials and annotations shall take precedence over graphic indications in the Contract Documents.

1.6 GC 2.2 - ROLE OF THE CONSULTANT

.1 Add at the end of paragraph 2.2.9, "The Owner and the Contractor shall waive any claims against the Consultant arising out of the making of such interpretations and findings made in accordance with paragraphs 2.2.7., 2.2.8. and 2.2.9".

.2 Delete the comma after the word "submittals" and add the words "which are provided" before the words "in accordance" in paragraph 2.2.14.
1.7 GC 2.4 - DEFECTIVE WORK

.1 Add new subparagraphs 2.4.1.1 and 2.4.1.2:

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

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

1.8 GC 3.1 - CONTROL OF THE WORK

.1 Add new paragraph 3.1.3:

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

1.9 GC 3.4 - DOCUMENT REVIEW

.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:

3.4.1 The Contractor shall review the Contract Documents and shall report promptly to the Consultant any error, inconsistency or omission the Contractor may discover. Such review by the Contractor shall comply with the standard of care described in paragraph 3.14.1 of the Contract. Except for its obligation to make such review and report the result, the Contractor does not assume any responsibility to the Owner or to the Consultant for the accuracy of the Contract Documents. The Contractor shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the Contract Documents, which the Contractor could not reasonably have discovered. 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 Contractor has received corrected or missing information from the Consultant.

1.10 GC 3.8 - LABOUR AND PRODUCTS

.1 Add new paragraph 3.8.4:

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

1.11 GC 3.10 - SHOP DRAWINGS

.1 Add the words "AND OTHER SUBMITTALS" to the Title after SHOP DRAWINGS.

.2 Add "and Submittals" after the words "Shop Drawings" in paragraphs 3.10.1, 3.10.2, 3.10.4, 3.10.7, 3.10.8, 3.10.8.2, 3.10.9, 3.10.10, 3.10.11, and 3.10.12.

.3 Delete 3.10.3 in its entirety and substitute new paragraph 3.10.3

GC 3.10.3 Prior to the first application for payment, the Contractor and the Consultant shall jointly prepare a schedule of the dates for submission and return of Shop Drawings and any
.4 Delete the words "with reasonable promptness so as to cause no delay in the performance of the Work" and replace with "within 10 working days or such longer period as may be reasonably required" in paragraph 3.10.12.

1.12 GC 3.14 - PERFORMANCE BY CONTRACTOR

.1 Add new General Condition 3.14.1

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

.2 Add new General Condition 3.14.2

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

.1 The personnel it assigns to the Project are appropriately experienced;

.2 It has a sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the Owner's approval, in the event of death, incapacity, removal or resignation.

1.13 GC 4.1 - CASH ALLOWANCES

.1 Delete paragraph 4.1.4 in its entirety and substitute new paragraph 4.1.4:

4.1.4 Where costs under a cash allowance exceed the amount of the allowance, unexpended amounts from other cash allowances shall be reallocated at the Consultant's direction to cover the shortfall.

.2 Delete paragraph 4.1.5 in its entirety and substitute new paragraph 4.1.5:

4.1.5. The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the Contract Price by Change Order.

.3 Delete paragraph 4.1.7 in its entirety and substitute new paragraph 4.1.7.

4.1.7 At the commencement of the work, the Contractor shall prepare for the review and acceptance of the Owner and the Consultant, a schedule indicating the times, within the construction schedule referred to in GC 3.5, that items called for under cash allowances and items that are specified to be Owner purchased and Contractor installed or hooked up are required at the site to avoid delaying the progress of the Work.

.4 Add new paragraph 4.1.8:

4.1.8 The Owner reserves the right to call, or to have the Contractor call, for competitive bids for portions of the Work, to be paid for from cash allowances.
1.14 **GC 6.4 - CONCEALED OR UNKNOWN CONDITIONS**

.1 Add new subparagraph 6.4.5:

6.4.5 The Contractor confirms that, prior to bidding the Project, it carefully investigated the Place of the Work and applied to that investigation the degree of care and skill described in paragraph 3.14.1, given the amount of time provided between the issue of the bid documents and the actual closing of bids, the degree of access provided to the Contractor prior to submission of bid, and the sufficiency and completeness of the information provided by the Owner. The Contractor is not entitled to compensation or to an extension of the Contract Time for conditions which could reasonably have been ascertained by the Contractor by such careful investigation undertaken prior to the submission of the bid.

1.15 **GC 6.5 - DELAYS**

.1 Delete the period at the end of paragraph 6.5.1, and substitute the following words: "but excluding any consequential, indirect or special damages."

.2 Add new subparagraph 6.5.6.

6.5.6 If the Contractor is delayed in the performance of the Work by an act or omission of the Contractor or anyone employed or engaged by the Contractor directly or indirectly, or by any cause within the Contractor's control, then the Contract Time shall be extended for such reasonable time as the Consultant may decide in consultation with the Contractor. The Owner shall be reimbursed by the Contractor for all reasonable costs incurred by the Owner as the result of such delay, including all services required by the Owner from the Consultant as a result of such delay by the Contractor and, in particular, the cost of the Consultant's services during the period between the date of Substantial Performance of the Work stated in Article A-1 herein as the same may be extended through the provisions of these General Conditions and any later, actual date of Substantial Performance of the Work achieved by the Contractor.

1.16 **GC 6.6 - CLAIMS FOR A CHANGE IN CONTRACT PRICE**

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

1.17 **GC 8.2 - NEGOTIATION, MEDIATION AND ARBITRATION**

.1 Add the following new paragraphs 8.2.9, 8.2.10, 8.2.11, 8.2.12., 8.2.13., and 8.2.14.

8.2.9 Within five days of receipt of the notice of arbitration by the responding party under paragraph 8.2.6, the Owner and the Contractor shall give the Consultant a written notice containing:

a) a copy of the notice of arbitration
b) a copy of supplementary conditions 8.2.9 to 8.2.14 of this Contract, and;
c) any claims or issues which the Contractor or the Owner, as the case may be, wishes to raise in relation to the Consultant arising out of the issues in dispute in the arbitration.

8.2.10 The Owner and the Contractor agree that the Consultant may elect, within ten days of receipt of the notice under paragraph 8.2.9, to become a full party to the arbitration under paragraph 8.2.6 if the Consultant:

a) has a vested or contingent financial interest in the outcome of the arbitration;
b) gives the notice of election to the Owner and the Contractor before the arbitrator is appointed;
c) agrees to be a party to the arbitration within the meaning of the rules referred to in paragraph 8.2.6, and,
d) agrees to be bound by the arbitral award made in the arbitration.
8.2.11 If an election is made under paragraph 8.2.10, the Consultant may participate in the appointment of the arbitrator and, notwithstanding the rules referred to in paragraph 8.2.6, the time period for reaching agreement on the appointment of the arbitrator shall begin to run from the date the respondent receives a copy of the notice of arbitration.

8.2.12 The arbitrator in the arbitration in which the Consultant has elected under paragraph 8.2.10 to become a full party may:
   a) on application of the Owner or the Contractor, determine whether the Consultant has satisfied the requirements of paragraph 8.2.10, and;
   b) make any procedural order considered necessary to facilitate the addition of the Consultant as a party to the arbitration.

8.2.13 The provisions of paragraph 8.2.9 shall apply mutatis mutandis to written notice to be given by the Consultant to any sub-consultant;

8.2.14 In the event of notice of arbitration given by the Consultant to a sub-consultant, the sub-consultant is not entitled to any election with respect to the proceeding as outlined in 8.2.10, and is deemed to be bound by the arbitration proceeding.

1.18 GC 9.1 - PROTECTION OF WORK AND PROPERTY
   .1 Delete subparagraph 9.1.1.1 in its entirety and substitute new subparagraph 9.1.1.1:

   9.1.1.1 errors in the Contract Documents which the Contractor could not have discovered applying the standard of care described in paragraph 3.14.1;
   
   .2 Delete paragraph 9.1.2 in its entirety and substitute the following new paragraph 9.1.2:

   9.1.2 Before commencing any Work, the Contractor shall determine the locations of all underground utilities and structures indicated in the Contract Documents, or that are discoverable by applying to an Inspection of the Place of the Work exercising the degree of care and skill described in paragraph 3.14.1.

1.19 GC 9.2 - TOXIC AND HAZARDOUS SUBSTANCES
   .1 Add to paragraph 9.2.6 after the word "responsible", the following new words:

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

   .2 Add "and the Consultant" after the word "Contractor" in subparagraph 9.2.7.4.

   .3 Add to paragraph 9.2.8 after the word "responsible", the following new words:

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

1.20 GC 9.5 - MOULD
   .1 Add "and the Consultant" after "Contractor" in subparagraph 9.5.3.4.
1.21 **GC 10.2 - LAWS, NOTICES, PERMITS, AND FEES**

.1 Delete from the first line of paragraph 10.2.5 the word, "The" and substitute the words: "Subject to paragraph 3.14.1, the".

1.22 **GC 12.1 - INDEMNIFICATION**

.1 Add new clause 12.1.3:

12.1.3. The *Contractor* shall indemnify and hold harmless the *Consultant*, its agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings by third parties that arise out of, or are attributable to, the *Contractor's* performance of the Contract, provided such claims are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and caused by negligent acts or omissions of the *Contractor* or anyone for whose acts the *Contractor* may be liable, and made in writing within a period of 6 years from the date of Substantial Performance of the Work as set out in the certificate of Substantial Performance of the Work, or within such shorter such period as may be prescribed by any limitation statute or the province or territory of the *Place of Work*.

1.23 **GC 12.3 - WARRANTY**

.1 Delete from the first line of paragraph 12.3.2 the word, "The" and substitute the words: "Subject to paragraph 3.14.1, the...".

End of Section
1 General

1.1 GENERAL SPECIFICATIONS

.1 Read “CCDC No. 2 2008”, “Supplements to the Contract Conditions”, and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 WORKMEN

.1 Contractor shall at all times enforce strict discipline and good order among his employees and subtrades and shall not employ on the project any unfit persons or anyone not skilled in the work assigned to him.

.2 Contractor shall provide appropriate place on the project site for those persons desiring to smoke during the course of construction. There shall be no smoking in the building. Contractor shall post no smoking signs to this effect and enforce the above provision.

1.3 GRADES, LINES, LEVELS & RESTRICTIONS

.1 The Contractor shall verify all grades, lines, levels and dimensions as shown on the drawings, and he shall report any errors or inconsistencies in the above to the Owner before commencing work.

.2 Each trade shall lay out their own work in co-ordination with other trades and be responsible for same.

1.4 PERMITS & REGULATIONS

.1 The Owner has applied and paid for the "Building Permit" with the City of Port Colborne. Contractor shall obtain and pay cost of all other permits and licences necessary for completion of this work. It is the responsibility of the Contractor to provide a foundation survey at the appropriate time.

.2 Contractor and others working under his jurisdiction shall perform all work in compliance with rules, regulations, and ordinances of any kind required by governmental authority or other agency having jurisdiction over this work.

.3 If Contractor observes that Contract Documents are in variance with any laws, regulations, and ordinances, he shall notify consultant and shall not proceed unless necessary changes required for compliance with said laws, regulations, and ordinances have been effected as provided in Contract for CHANGES.

Contractor shall be fully responsible for work knowingly performed contrary to the said laws, regulations, and ordinances and shall fully indemnify Owner against loss, and shall bear all costs and penalties arising there from.

.4 Contractor shall secure all certificates of inspection and occupancy that may be required by authorities having jurisdiction over the Work. These certificates shall be delivered to Consultant upon completion of the Work.

1.5 PROJECT MEETINGS

.1 A preconstruction conference between Consultant and Contractor shall be held at the site prior to commencement of the Work. This meeting shall be for the purpose of resolving current problems, further orienting Contractor to requirements of Contract Documents, informing Contractor of Consultant's responsibility to Owner for the supervision, and working out with Contractor a general schedule of supervision. The Authorized Representative of the Owner shall be invited to this meeting.
1.6 PROTECTION

1. Protection in General - The Contractor shall protect the existing branch and spaces and shall make all necessary repairs at his own expense. The protection of all employees, visitors, and general public as they may be affected by the proposed construction and proposed demolition must be included in the contract.

2. Water Protection - The various contractors shall at all times protect the excavation, trenches, and the building from damage from rainwater, spring water, ground water, backing up of all drains or sewers, and all other water. He shall provide all pumps and equipment and enclosures to provide this protection.

3. Temporary Drainage - The various contractors shall construct and maintain all necessary temporary drainage and do all pumping necessary to keep the excavation free of water.

4. Bracing, Shoring and Sheeting - The various contractors shall provide all shoring, bracing and sheeting as required for safety and for the proper execution of their work; and have same removed when the work is completed.

5. Guard Lights - The various Contractors shall provide and maintain guard lights at all barricades, railings, obstructions in the roads or sidewalks, and at all trenches or pits adjacent to all walks or roads.

6. Damage - Any work damaged by failure to provide protection above required, shall be removed and replaced with new work at the various contractors expense.

7. Fire Protection
   1. It shall be the duty of all the contractors for their own protection, to maintain in each temporary office, tool room or storage room assigned to him, a fire extinguisher of not less than one gallon capacity and to provide similar extinguishers located in the building in close proximity to this work.
   2. Provide such other fire prevention facilities and fire fighting facilities as may be required by Dominion, Provincial or Municipal regulations, installed to the approval of the authorities having jurisdiction.

8. Protection Against Accidents
   1. The Contractors shall take all safety precautions and furnish and install guards, fences, barriers, rails, etc. necessary for the prevention of accidents and shall comply with all laws and regulations as stipulated under the Construction Safety Act 1993 in the Occupational Health & Safety Act & Regulations for Construction Projects, Ontario Regulation 21391, or latest regulations.
   2. The Contractors hereby assume entire responsibility for any and all damage, loss or injury of any kind or nature whatever to persons or property caused by or resulting from the execution of the work provided for in the contract, or in connection therewith, and the contractor agrees that the Contractor will indemnify and hold harmless the Owner, the Architect, the Construction Manager and any and all of the Owner’s, Architects and the Construction Manager, officers, agents and servants from and against all claims, loss, damage, charge or expense, whether direct or indirect, and whether to persons or property, to which the Owner, Architects and or the Contractors or any of said parties may be put or subjected by reason of any act, action, neglect, omissions or default on the part of the Contractors.
   3. Neither the Owner or Architect shall be responsible or be held liable for any damage to persons or property consequent upon the use, misuse, or failure of any hoist, rigging, blocking, scaffolding, or other equipment, used by the Contractors. The use of any such hoist, rigging, blocking, scaffolding or other equipment used by the
Contractors shall be construed to mean that the Contractor accepts all responsibility for any claim for damages, whatsoever resulting from the use, misuse, or failure of such apparatus whether such damages be to his own employees or property of any other contractors, subcontractors, the Owner, the Architects, or otherwise.

.4 The Contractors agree that they will carry on the work at his own risk until same is fully completed and accepted, and will in case of any accident, destruction, or injury to the work and/or materials before its final completion and acceptance, repair or replace forthwith the work and/or materials so injured, damaged and destroyed at his own expense and to the satisfaction of the Architects.

1.7 SUBMITTALS

.1 Construction Schedules
.1 Contractor, immediately after being awarded Contract, shall prepare and submit for Consultant's approval an estimated Progress Schedule for the Work. Progress Schedule shall be in sufficient detail to include but not be limited to:

.1 Significant elements of the Work.
.2 Time frame for each element of the Work with a beginning and ending point.
.3 Percentage of progress of the Work with a beginning and ending point.
.4 Value of elements of the Work and relationship of elements of the Work one to another for the total work under Contract.

.2 Contractor shall notify Consultant a minimum of 24 hours in advance of performing any Work which would cover or otherwise make it difficult to inspect any structural, plumbing, mechanical, or electrical work. Should any of the said work be covered without proper notification having been given Consultant, Contractor shall uncover that work for inspection at his own expense. Contractor shall schedule the work so that an inspection team may observe and inspect a maximum part of the mechanical, electrical, and plumbing work in operating condition before it is covered up. This formal overhead inspection team will furnish a list of items that must be completed to the satisfaction of Consultant before the work is covered over. Contractor shall notify Consultant when he is ready for the overhead inspection.

.2 Shop Drawings, Product Data & Samples

.1 Definitions
Samples are physical examples furnished by Contractor to illustrate materials, equipment, colour, or workmanship and to assist in the establishment of standards by which the work will be judged.

.2 Procedure
It is the responsibility of the contractor to review and stamp all shop drawings prior to submittal for Architect's review. The Architect will return the shop drawings unreviewed if not reviewed by the contractor first.

Submit all shop drawings and samples required by the Contract Documents.

.1 Divisions and Sections of the specification requiring submission of shop drawings to Consultant are indicated in that Division or Section.

.3 Certified Sets of all shop drawings are to be submitted to General Contractor for delivery to the Architect for review and distribution as follows:

.1 One set for Architect, original, certified copy or PDF
.2 Certified copy or PDF returned to the Contractor and hence to subtrade and supplier. Extra certified copies shall be submitted to meet the additional requirements of the General Contractor for his subtrade or suppliers.

.4 All precast concrete slabs, structural steel, open web steel and wood truss shall be stamped by a professional engineer registered in the Province of Ontario.

.5 Drawings shall be corrected and resubmitted as necessary to obtain the Architects
No order shall be given, fabricated or manufacture of any part shall not commence until the appropriate drawings have been stamped "No Comment" and thereafter no change shall be made to any drawings without approval of the Architect.

Where specified or required, Contractor shall submit samples to Consultants together with specification material, affidavits, and other documentation as may be required by Consultant. It is Contractor's specific responsibility to ascertain that samples together with transportation, delivery, and any other costs, shall be borne by Contractor. Samples shall be submitted in duplicate and one of each sample shall be retained in the office of Consultant until completion of the Project. Where samples are specifically required to be submitted for approval, no work involving the sampled materials shall proceed until written approval has been obtained from Architect.

1.8 MATERIAL & EQUIPMENT

.1 Material and Equipment

.1 Materials incorporated into the Project shall be new, of specified quality, and furnished in sufficient quantity to facilitate proper and speedy execution of the work.

.2 Contractor shall, if required, furnish evidence of the quality of any materials.

.3 Any materials not meeting requirements of Contract Documents shall be removed from the Project by Contractor without expense to Owner.

.4. It is the responsibility of the Contractor to ensure that all materials meet "Canadian" Standards, tests and Codes. Any material not meeting these requirements must be removed from the Project by the Contractor without expense to the Owner.

.5 The use of products manufactured overseas including the U.S.A. is permitted only if it can be shown that these products meet Canadian Standards and Canadian Tests, and are accepted by the authorities having jurisdiction which in this instance will include the Ontario Fire Marshal. The onus will be on the Contractors and Suppliers to provide this information to the Architect and the Authorities having jurisdiction. Any material not receiving prior approval must be removed for the job site and any material installed must be removed and acceptable material installed at the Contractor's expense.

.2 Transportation and Handling

.1 Materials shall be delivered to the site in their original packaging with labels and trademarks intact, and such labels and trademarks shall remain intact until used.

.3 Contractor shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, and permits and shall arrange and maintain parking of vehicles and storage of materials in an orderly manner, leaving all walks, driveways, roads and entrances unencumbered.

.4 All equipment on the site shall be protected from physical damage and from the elements by measures satisfactory to Consultant. All rotating equipment shall be rotated four turns once each week during construction.

1.9 CONTRACT CLOSEOUT

.1 Final Cleaning

.1 Cleaning required in SCC29 of the General Conditions shall include, but not be limited to, the following specifics:

.1 Prior to and during the process of painting, staining, or varnishing, the areas where such work is in progress shall be cleared of all debris, rubbish, or building materials which may cause dust. Floors shall be swept as required and all possible steps taken to keep the area dust-free.

.2 In addition to the general cleaning noted above, Contractor shall do the following special cleaning for all Trades at the completion of the work:

.1 Remove putty stains from all glass. Wash and polish glass inside and outside, exercising care not to scratch the glass.
.2 Remove marks, stains, fingerprints, and other soil and dirt from the painted, decorated, or stained work.
.3 Clean and polish woodwork.
.4 Clean and polish hardware for all Trades. This shall include removal of stains, dust, dirt, and paint, etc.
.5 Remove spots, soil, and paint from tile work and wash tile.
.6 Clean fixtures and equipment, and remove stains, paint, dirt, and dust.
.7 Remove temporary floor protection, and clean and polish floors.
.8 Clean exterior and interior metal surfaces, including doors, and windows required to have polished finishes, of oils, stains, dust, and dirt, etc.
.9 Polish surfaces, leaving them without fingerprints or other blemishes.

2. If Subcontractor fails to clean up, Contractor may do so and the cost thereof shall be charged to the Subcontractor.
1 General

1.1 GENERAL

.1 Read "CCDC No. 2 2008", "Supplements to the Contract Conditions", and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 PROJECT SPECIFICATION FORMAT

.1 Ensure that Subcontractors and suppliers carefully read and study the General Conditions, Supplementary Conditions, of the Stipulated Price Contract and Division 1, General Requirements before commencing their respective work. Claims for delay and/or extra expense will not be accepted by reason of non-compliance with this requirement.

.2 The Project Specification is arranged to CSC/CSA MASTER FORMAT 16 Division format.

.3 The Project Manual has been divided into Divisions and the Divisions into Sections for reference, but a Section may consist of the work of more than one Subcontractor or supplier. The responsibility for determining which Subcontractor or supplier shall provide labour, material, products, equipment and services to complete the work rests solely with the Contractor.

.4 This Project Manual is not intended as a detailed description of installation methods, but serves to indicate particular requirements in the completed work.

.5 Inclusion in the Project Specification or indication on the Drawings of materials, products, operations, or methods, requires that the Contractor provide each item specified or indicated of the quality or subject to the qualifications noted; perform according to the conditions stated; and provide labour, materials, products, equipment and services to complete the work.

1.3 DISCREPANCIES/CONFLICTS/OMISSIONS

.1 If discrepancies or conflicts in, or omissions from Drawings, Specifications or other Contract Documents are suspected, or if there is doubt as to the meaning or intent thereof, notify the Consultant at once.

.2 Comply with Consultant's written instructions or explanations.

1.4 COORDINATION

.1 Co-ordinate work of each Section as required for satisfactory and expeditious completion of work. Take field dimensions required. Take into account existing installations to assure best arrangements of components in available space. Fabricate and erect work to suite field dimensions and field conditions.

.2 Provide forms, templates, anchors, sleeves, inserts, and accessories or other components required to be fixed to or inserted in work. As applicable set them in place or instruct related Sections as to their location.

.3 Pay cost of extra work caused by, and make up time lost as result of, failure to comply with these requirements at the proper time.

1.5 EXAMINATION

.1 Examine the site of the work carefully, and investigate and be satisfied as to all matters relating to the nature of the work to be undertaken as to the means of access and egress to and from the site; as to obstacles to be met with; as to the rights and interests which may be interfered with during the construction of the work, as to the extent of the work to be performed and any and all matters which are referred to in the Drawings, Specifications, and
other Contract Documents, or which are necessary for the full and proper understanding of the work and the conditions under which it will be performed. No allowances shall be made subsequently by the Owner or Consultant for error or negligence in connection with this requirement.

.2 Before commencing the work of any Section, carefully examine the work of other Sections upon which it may depend. Report in writing to the Consultant, defects which might affect new work. Commencement of new work implies acceptance of all work by other Sections and other Contractors upon which the new work depends.

1.6 DIMENSIONS

.1 Check all dimensions at the site before fabrication and installation commences and report all discrepancies to the Consultant.

.2 Where dimensions are not available before fabrication commences, ensure that the dimensions required are agreed upon between the parties concerned.

.3 Wall thicknesses shown on the Drawings may be nominal only; ascertain the actual sizes at the building.

.4 Verify dimensions of shop fabricated portions of the building on the site before shop drawings and fabrications are commenced. The Owner will not accept claims for extra expense by reason of non-compliance with this requirement.

.5 In areas where equipment is to be installed, ensure that equipment supplied is dimensionally suitable for space provided including necessary access and clearance. Provide adequate space for servicing of equipment and removal and reinstallation of replaceable items including, but not limited to, such items as motors, coils, and tubes.

.6 The mechanical and electrical Drawings are intended to show approximate locations of mechanical and electrical apparatus, mechanical fixtures, mechanical equipments, piping and duct runs, electrical fixtures, electrical outlets, electrical equipment, electrical units, and conduit in diagrammatic form. In locations where spatial characteristics or job conditions make it difficult to determine or comply with the intended location of these items obtain direction from the Consultant. If relocation of such item(s) is necessary it shall be done without change to the Contract Price.

.7 Leave areas clear where space is indicated to be reserved for future equipment, including access to such future equipment.

.8 Ensure that pipes, conduit, service lines and ducts are concealed in chases, behind furring or above ceiling except where such items are noted as being exposed and except where no ceiling is provided. Install equipment, materials, and products to present a neat appearance. Run piping, ducts and conduit parallel to or perpendicular to the building planes. Install piping, ducts, and conduit as close to underside of structure as possible, unless shown otherwise.

1.7 CONCEALMENT OF WORK

.1 Conceal pipes, ducts, tubing, wiring and other items requiring concealment in floor, wall and ceiling construction of finished areas except where indicated of specified otherwise. If in doubt request clarification before proceeding with work in question.

.2 Lay out mechanical and electrical work in advance of concrete placement and furring installation to allow for its proper concealment.

.3 Test and inspect work before applying pipe covering and before work is concealed.
1.8 OVERLOADING

.1 Do not load the structure during construction with a load greater than it is calculated to bear safely. Be solely responsible and liable for damages resulting from violation of this requirement. Provide temporary bracing and supports equivalent in strength to the permanent support. Do not place loads on concrete floors until they have obtained their design strength.

.2 Do not cut, bore, or sleeve load bearing members unless shown on structural Drawings or otherwise accepted by the Consultant in writing.

1.9 CODES AND STANDARDS

.1 Contract forms, codes, specifications, standards, manuals, and installation and application instructions referred to in these Specifications to be the latest published editions at the date of submission of the bid unless otherwise stated in the applicable building code.

1.10 FIRE RATINGS

.1 Where a material, component or assembly is required to be fire rated, the fire rating shall be as determined or listed by one of the following testing authorities acceptable to the authorities having jurisdiction:

- Underwriters’ Laboratories of Canada
- Underwriters’ Laboratories of (U.S.A.)
- Factory Mutual Laboratories
- The National Research Council of Canada
- The National Board of Fire Underwriters
- Warnock Hersey Professional Services Ltd.

.2 Where reference is made to only one testing authority, an equivalent fire rating as determined or listed by another of the aforementioned testing authorities is acceptable if approved by authorities having jurisdiction. Obtain and submit such approval of authorities, in writing, when requesting acceptance of a proposed equivalent rating or test design.

End of Section
1 General

1.1 SECTION INCLUDES
.1 Quality assurance criteria.

1.2 RELATED SECTIONS
.1 Section 014500 - Quality Control.
.2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES
.1 Associated Air Balance Council (AABC): National Standards For Field Measurements and Instrumentation, Total Systems Balance, Air Distribution-Hydronics Systems.

1.4 QUALITY ASSURANCE
.1 Cooperate with testing organization services as specified in Section 01 45 00 - Quality Control.
.2 Testing organization: Current member in good standing of their respective professional or industry organization and certified to perform specified services.
.3 Comply with applicable procedures and standards of the certification sponsoring association.
.4 Perform services under direction of supervisor qualified under certification requirements of sponsoring association.
.5 Qualifications:
   .1 Provide adequate workforce training through meetings and demonstrations.
   .2 Have someone on site with deconstruction experience throughout project for consultation and supervision purposes.

End of Section
1 General

1.1 SECTION INCLUDES
   .1 Inspection and testing, administrative and enforcement requirements.
   .2 Tests and mix designs.
   .3 Mock-ups.
   .4 Mill tests.
   .5 Equipment and system adjust and balance.

1.2 RELATED SECTIONS
   .1 Section 01 21 00 - Allowances.
   .2 Section 01 35 18 - LEED Requirements and Procedures.
   .2 Section 01 43 00 - Quality Assurance.
   .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES
   .2 SCC (Standards Council of Canada).

1.4 INSPECTION BY AUTHORITY
   .1 Allow Authorities Having Jurisdiction access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
   .2 Give timely notice requesting inspection whenever portions of the Work are designated for special tests, inspections or approvals, either when described in the Contract Documents or when required by law in the Place of the Work.
   .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

1.5 REVIEW BY CONSULTANT
   .1 Consultant may order any part of Work to be reviewed if Work is suspected to be not in accordance with Contract Documents.
   .2 If, upon review such work is found not in accordance with Contract Documents, correct such Work and pay cost of additional review and correction.

1.6 INDEPENDENT INSPECTION AGENCIES
   .1 Independent Inspection and Testing Agencies will be engaged by Owner or Consultant for purpose of inspecting and testing portions of Work. Unless specified as a Contractor responsibility in Section 02 to 49, cost of such services will be borne by Owner and disbursed from the Testing & Inspection Allowance of the Contract.
   .2 Testing Organizations: Listed by SCC within info@palcan@scc.ca listings.
   .3 Allocate Costs: To Section 01 21 00 - Allowances: Inspecting and Testing Allowances.
   .4 Provide equipment required for executing inspection and testing by appointed agencies.
   .5 Employment of inspection and testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
   .6 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and testing to ascertain full degree of defect. Correct defect and irregularities as advised by Consultant at no cost to Owner. Pay costs for retesting and re-inspection.
1.7 ACCESS TO WORK
.1 Allow inspection and testing agencies access to Work, off site manufacturing and fabrication plants.
.2 Co-operate to provide reasonable facilities for such access.

1.8 PROCEDURES
.1 Notify appropriate agency and Consultant in advance of requirement for tests, in order that attendance arrangements can be made.
.2 Submit samples and materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
.3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

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

1.10 REPORTS
.1 Submit four (4) paper copies and one (1) electronic copy of signed inspection and test reports to Consultant.
.2 Provide copies to Subcontractor of work being inspected or tested.

1.11 TESTS AND MIX DESIGNS
.1 Furnish test results and mix designs as may be requested.
.2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work shall be appraised by Consultant and may be authorized as recoverable.

1.12 MOCK-UPS
.1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
.2 Construct in all locations acceptable to Consultant.
.3 Prepare mock-ups for Owner's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
.4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
.5 If requested, Consultant will assist in preparing a schedule fixing dates for preparation.
.6 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.
1.13 MILL TESTS
   .1 Submit mill test certificates as requested and as specification sections require.

1.14 EQUIPMENT AND SYSTEMS
   .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.
   .2 Refer to Division 14 and 25 for definitive requirements.

End of Section
1 General

1.1 GENERAL

.1 Read "General Requirements of the Contractor for All Specification Divisions", Section 01 01 00 which forms part of this Specification Division as though herein written out in full.

1.2 SCOPE OF WORK

.1 This trade shall supply all labour, equipment, materials and supervision necessary to complete the demolition as shown on the drawings and as specified herein including:

.1 Perform selective demolition shown on all drawings and noted in all specification sections using skilled trades suited to the range of demolition work. The contractor shall carefully remove all identified material and systems in a manner so as not to disturb those walls, floors, ceiling system and other parts of the existing building which are required to remain.

.2 Comply with Environmental Protection Act, Ontario Regulations 0. Reg. 102/94 and Reg. 103/94 for waste management program on construction and demolition projects. Provide sources separation to disassemble and collect in an orderly fashion the following ": materials designated for alternative disposal" from the "general waste" stream.

- Portland Cement Concrete
- Cardboard (Corrugated)
- Gypsum Board (Unfinished)
- Steel

.3 Decommission electrical wiring, plumbing, utility supply lines and telecommunication systems in accordance with Mechanical and Electrical Technical Specification Divisions after identifying and verifying with the Consultant and Owner the extent of removal and the method of termination at points beyond the area of demolition.

.4 Coordinate fully with the Owner's forces and schedule with them to allow adequate time to permit them to address termination, separate removal tasks described in the drawings or as otherwise directed.

.5 Demolition work shall be done in strict accordance with all applicable laws, ordinances, and codes.

.6 In addition to other restrictions, the burning of any materials or rubble on the site is not permitted without approval by the City of Port Colborne Fire Department. A fire extinguisher shall be present, or water line shall be laid at all points where burning torches are used for cutting.

.7 Contaminated or dangerous material if encountered, shall be removed from the site and disposed of by safe means so that no danger is involved at the job site or in disposing of same.

.8 Prior to commencing any demolition on any parcel, the contractor shall prepare the work in such a manner as to keep dust at a minimum. Dust shall also be controlled during all loading and hauling operations.

.9 The contractor shall furnish and erect all temporary sidewalks, barricades, covers, and other temporary structures for the proper and safe conduct of the work as required by law, and shall remove all such temporary structures upon the completion of the work.

2 Products

2.1 MATERIALS

.1 Except as noted herein, all materials forming permanent part of building requiring demolition
become the Contractor's property and must be removed by the Contractor. Where the word "remove" occurs herein it shall mean removal from the site unless otherwise stated.

The general contractor shall assume full responsibility for the handling and disposal of removed materials including the proper separation of materials (i.e. hazardous waste, clean scrap, building rated material waste, and recycling non-ferrous materials, etc.) as per regulations and in accordance with the "Environmental Practices" best recommended methods.

End of Section
1. **General**

1.1 **GENERAL REQUIREMENTS**

Read "CCDC No. 2 2008", "Supplements to the Contract Conditions", and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 **SECTION INCLUDES**

.1 Patching deteriorated and damaged stone.
.2 Veneering deteriorated and damaged masonry.
.3 Repointing mortar joints.

1.3 **RELATED SECTIONS**

.1 Division 01: Administrative, procedural, and temporary work requirements.

1.4 **REFERENCES**

.1 ASTM A480/A480M-08 - Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
.2 ASTM A666-03 - Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
.3 ASTM C97-02 - Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
.4 ASTM C170-06 - Compressive Strength of Natural Building Stone.
.5 ASTM C295-03 - Standard Guide for Petrographic Examination of Aggregates for Concrete.
.7 International Masonry Industry All-Weather Council (IMIAC) - Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.
.8 Standards / References: Perform work using latest guideline version of "Key elements for proper repointing of older masonry" NRCC - 50809.

1.5 **DEFINITIONS**

.1 Defective Mortar Joints: Joints in which mortar is missing, loose, spalled, eroded, powdered, broken, hollow, unsound, soft, or weathered more than 5 mm3/16 inch from original plane. Sound joints containing fine hairline cracks are excluded.

1.6 **SUBMITTALS FOR REVIEW**

.1 Samples:

   .1 Remove two (2) samples of existing mortar from different un-weathered locations; submit for comparison to new mortar samples.

1.7 **SUBMITTALS FOR INFORMATION**

.1 Section 01 33 00: Submission procedures.
.2 Qualification Statement: Installer qualifications, including previous projects.

1.8 **QUALITY ASSURANCE**

.1 Preconstruction Testing Laboratory Services:

   .1 Test stone to ASTM C170.

   .2 Report the following:

   .1 Compressive strength.

   .2 Absorption.

   .3 Initial rate of absorption (suction).

   .3 Identify physical and mechanical characteristics.
Installer Qualifications:
.1 Company specializing in performing the work of this section with minimum five (5) years documented experience.
.2 Successful completion of at least three (3) projects of similar scope and complexity within past five (5) years.

1.9 MOCK-UP
.1 Section 01 43 00: Requirements for mock-up.
.2 Sampling: With the Consultant’s approval, select an inconspicuous location for sampling. For each variable of the existing mortar type, provide a two square foot area of new mortar work for comparison with existing mortar to be preserved. Allow mortar to cure to within 70% of final cure for accurate colour and texture comparison.
.2 Restore 1 sq m 10 square feet of existing brick.
.3 Identify in writing, the following:
   .1 Masonry reconstruction procedures.
   .2 Masonry patching techniques.
   .3 Routing and re-pointing procedures.
   .4 Mortar colour and texture.
   .5 Joint tooling sequence and profile.
   .6 Overall workmanship and procedures.
.4 Perform work in presence of Consultant.

1.10 PROJECT CONDITIONS
.1 Protection of Work:
   .1 Cover top of wall with strong tear-resistant waterproof membrane at end of each day or shutdown.
   .2 Cover partially completed walls when work is not in progress.
   .3 Extend cover minimum of 600 mm 24 inches down both sides; hold securely in place.
   .4 Prevent staining and damage to exposed masonry.
   .5 Protect sills, ledges, and projections from mortar droppings; remove droppings immediately.
.2 Load Application:
   .1 Do not apply uniform loads for at least twelve (12) hours after building masonry columns or walls.
   .2 Do not apply concentrated loads for at least three (3) days after building masonry columns or walls.
.3 Environmental Requirements:
   .1 Hot weather requirements: If ambient temperature is over 35 degrees C 95 degrees F or relative humidity is less than 50 percent, protect from direct sun and wind exposure for minimum 48 hours after installation.
.4 Cold weather requirements:
   .1 CSA A371 requirements.
   .2 Do not use frozen materials or build upon frozen work.

1.11 SEQUENCING
.1 Restore and clean masonry in following sequence:
   .1 Clean masonry to Section 04 01 21.
   .2 Replace damaged and missing masonry.
   .3 Rout and re-point mortar joints.
   .4 Clean and finish masonry.
.2 Schedule the work to accomplish this requirement.
2. Products

2.1 MATERIALS

.1 Product
Mortar: conform to CSA Types ‘O’ & ‘K’ mortar mixtures using matching sand of identical colour and texture compared to existing mortar samples of adjacent masonry, Quick Lime and Portland Cement. Vary the mixture according to the condition and hardness(strength) of existing mortar. Review choice of mortar mixture (component of lime) with consultant based on the proposed mortar application; re-pointing, new masonry installation and orientation/exposure.
Pigments: Provide pigments to mortar where applicable to match existing pigment mixtures found in existing mortar.
Natural Stone: Provide native limestone to match existing stone when replacing in kind, either due to extensively deteriorated or missing parts of masonry elements in sizes and finish to match surviving prototypes for colour, hardness, and tooling marks.

.2 Use salvaged stone where appropriate. If salvaged materials are of insufficient quantity or are unsuitable for reuse provide new materials to match existing in compressive strength, absorption, initial rate of absorption, colour, size, and surface texture.

2.2 ACCESSORIES

.1 Anchors: Stainless steel, ASTM A480/A480M or A666, Type 304.
.2 Patching Compound: Premixed cementitious mortar mix, colour to match existing stone; Jahn Restoration Mortar by Cathedral Stone Products, Inc.
.3 Epoxy: Multiple component, 100 percent solids, produced specifically for setting anchors in masonry.
.4 Bonding Agent: Two component modified epoxy resin.

3 Execution

3.1 PREPARATION

.1 Evaluate the overall condition of the exterior masonry and determine whether more than protection, maintenance and limited repair are required. Photo-document the existing condition prior to commencement of remedial work. Report to consultant if extensive repairs appear warranted.
Where advised by notes or by other specification sections to clean the existing masonry, perform a chemical cleaning using non-invasive methods or products.

.2 Prior to beginning work examine existing mortar joints to determine procedures required to match new mortar to existing, including:
.1 Order in which horizontal and vertical joints were tooled.
.2 Style of tooling including depth and profile.

.3 Review natural sands and trace elements (shells, granite, quartz, fibre, range of particle sieve sizes) of existing mortar sands and match. Sand must be free of impurities, such as salts or clay.

3.2 DAMAGED AND MISSING MASONRY

.1 Using best practices, prepare masonry wall surfaces and other masonry elements for re-pointing of the mortar joints where there is evidence of deterioration such as disintegrating mortar, damp walls or damaged. Remove deteriorating or inappropriate mortar by carefully raking the joint using hand tools or appropriate mechanical means to avoid damaging the masonry.

.2 Establish lines, levels, and courses to match existing.

.3 Fit new masonry to bond and coursing of existing masonry.
Lay masonry plumb and true to line.
Do not shift masonry after mortar has achieved initial set. If adjustments must be made after initial set, remove mortar and replace with new.
Lay solid masonry units in full mortar bed, with full head joints.
Lay hollow masonry units with face shell bedding on head and bed joints.
Do not butter corners or excessively furrow joints.
Cut masonry with straight, true cuts and clean, un-chipped edges. Prevent oversized or undersized joints. Discard damaged units.
Do not expose cut cells in finished work.
Where fresh masonry joins existing or partially set masonry, remove loose masonry and mortar; clean and lightly wet exposed surface of set masonry.
Do not permit mortar to accumulate in cavities.
Rake out joints to 13 mm1/2 inch depth.

3.3 PATCHING STONE

 Large Spalled Areas and Severely Deteriorated Surfaces:
- Patch deteriorated stone with new stone to match existing.
- Remove deteriorated stone to point at which sound material is reached.
- Set anchors in existing masonry:
  - Drill holes for anchors at interface of new and existing masonry.
  - Space anchors maximum 9 inches on center.
  - Provide minimum 3/4 inch coverage of patching compound over ends of anchors.
  - Extend anchors into sound existing masonry to a depth equivalent to anchor projection.
  - Bond anchors to existing masonry with epoxy.
- Apply Patching Compound:
  - Lightly wet masonry. Apply chemical bonding agent to manufacturer’s written instructions.
  - Mix and apply patching compound to manufacturer’s written instructions. Build up in maximum 13 mm1/2 inch thick layers.
  - Allow each layer to cure minimum 12 hours before proceeding. Lightly wet set material and existing masonry before applying next layer.
  - Finish patches to match colour and texture of existing.
  - Keep patches moist until fully cured.

 Small Spalled Areas, Minor Cracks and Holes, and Lightly Deteriorated Surfaces:
- Patch stone with patching compound to match existing.
- Remove deteriorated stone until sound material is reached.
- Score or groove contact surfaces of stone to form mechanical bond with patching compound.
- Lightly wet masonry. Apply chemical bonding agent to manufacturer’s written instructions.
- Mix and apply patching compound to manufacturer’s written instructions. Build up in maximum 13 mm1/2 inch thick layers.
- Allow each layer to cure minimum 12 hours before proceeding. Lightly wet set material and existing masonry before applying next layer.
- Finish patches to match colour and texture of existing.
- Keep patches moist until fully cured.

3.4 VENEERING MASONRY

- Resurface deteriorated masonry with new masonry to match existing.
- Remove deteriorated masonry to point at which sound material is reached.
- Drill holes for dowels at interface of new and existing masonry.
- Anchor new masonry to existing with anchors set in epoxy.
- Finish new masonry flush with existing.
3.5 ROUTING AND REPOINTING MORTAR JOINTS

.1 Remove large masonry units where bedding mortar is deteriorated, cracked or loose, after carefully marking the location of the unit for replacement location, roughen bedding area to bind new mortar, wetting as required. Where there is poor surface conditions for adhesion of replaced masonry unit, advise the consultant and with his approval apply a bonding agent to the bedding area using best masonry practices for type, application and setting times.

.2 Prepare dynamic joints and cracks to receive sealer.

.3 Repoint static joints with pointing mortar to match existing.

.4 Remove existing mortar to depth equal to 2-1/2 times joint width, but not less than 13 mm (1/2 inch) or depth at which sound mortar is reached.

.5 Remove loose particles with compressed air.

.6 Lightly wet masonry just prior to re-pointing.

.7 Fill areas where mortar has been removed to greatest depth first.

.8 Build up mortar in several 6 mm/1/4 inch compacted layers until outer face of masonry is reached.

.9 Allow each layer to reach thumbprint hardness prior to applying next layer.

.10 If existing masonry has worn, rounded edges, recess mortar slightly from face of masonry.

.11 When final mortar layer has reached thumbprint hardness, tool to match sequence and profile of existing. Avoid light streaks, hairline cracks, tool burning, open joints, and other defects caused by tooling when mortar is excessively wet or dry.

.12 Remove excess mortar from edge of joint by brushing with stiff bristle brush; wire brushes not permitted.

.13 If necessary to more closely match existing mortar colour and texture, artificially age mortar using one of following methods:

   .1 Lightly brush with stiff natural brush after tooling.
   .2 Apply fine mortar spray with low pressure water after tooling.
   .3 Staining is not permitted.

3.6 CLEANING

.1 Clean mortar and work-related discolouration from stone to match colour of adjacent stone.

End of Section
1 General

1.1 GENERAL
.1 Read “CCDC No. 2 2008”, “Supplements to the Contract Conditions”, and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 SCOPE OF WORK
.1 Supply only of all steel frame product including transom frames, sidelight and window assemblies and all steel door product with provision for glazed, paneled or louvered openings, fire labeled or non-labeled as scheduled and detailed by architect. Take job measurements where required. Provide shop drawings in accordance with the general conditions of the contract identifying each opening by architect's numbering system, and indicating type of frame, door, core, material thickness, mortises, reinforcements, anchorages, cutouts (glazed, panels or louvers) for each opening and instructions for setting by others. Coordinate with Door/Frame hardware template requirements as provided by hardware supplier.

2 Products

2.1 PRESSED STEEL FRAMES & SCREENS
.1 Where indicated on the Drawings and Schedules, this Subcontractor shall supply pressed steel frames for doors, sidelights, top lights, and borrowed lights, as manufactured by Artek Doors, Fleming, Baron, or Allsteel Doors. The following is excluded from this trade: lintels, frames constructed of structural steel members, finishing hardware, glass and glazing, and finish painting. All frames shall be fabricated from 16ga tension leveled steel galvanized to coating designation A40 (ZF120) known commercially as galvanneal steel. Corner joints shall be accurately mitered and factory welded on the inside of the frame faces and returns with exposed faces filled and ground smooth. Fire labeled product shall be provided as determined and scheduled by architect. Frames shall be set in place by the General Contractor. Provide anchorage suitable to floor, wall and frame construction with each anchor located immediately above or below each hinge reinforcement and directly opposite on the strike jamb unless otherwise indicated below. Provide 2 temporary spreaders to ensure proper frame alignment during shipping to be removed before anchoring frame to floor. Set frames plumb, square, aligned and without twist. Where zinc coating has been removed during fabrication frames are to receive a factory applied touch-up primer. All exposed surfaces marred during shipping or installation shall be touched-up with a rust inhibitive primer.

Frame product installed in unit masonry type walls shall be provided with steel wire anchors or "T" type anchors. Frame product installed in steel stud and drywall partitions shall be provided with snap-in or "Z" type stud anchors. Frame product in wood stud and drywall partitions shall be provided with snap-in or wood stud type anchors. Frame product installed in existing masonry walls shall be punched and dimpled to accept bolt for existing wall anchor to be located not more than 6" from top and bottom of each jamb and immediately above or below intermediate hinge reinforcing and directly opposite on strike jamb. Bolts for existing wall anchors to be provided by installation contractor.

Frames to be prepared for hardware as per approved hardware schedule and templates provided by hardware supplier. Blank, reinforce, drill and tap all frames to receive fully templated mortised hardware. Reinforce all frames for application of surface mounted hardware; drilling and tapping for mortise hardware not fully templated and surface mounted.
hardware will be done by contractor responsible for installation on site. All frames shall be prepared for single stud door silencers, 3 per strike jamb for single frames and 2 per head for pair frames. All strike and hinge reinforcements shall be protected by mortar guard boxes welded to frame. For glazed lights, supply and install removable stops with flat-head countersunk screws.

2.2 HOLLOW METAL DOORS

.1 Doors shall be 1-3/4" thick of the types and sizes as noted on door schedule and manufactured by Artek, Fleming, Baron, Allsteel Doors. Doors shall be fabricated of 18 gauge tension leveled steel galvanized to coating designation A40 (ZF120) known commercially as galvanneal steel. Longitudinal edges shall be mechanically interlocked, glued, tack welded at 6" on centre with voids filled and sanded smooth with no visible seams. Door core to be honeycomb kraft paper pressure laminated to each face sheet unless otherwise noted on door schedule. Inverted, recessed end channels to be welded to each face sheet at 6" on centre in top and bottom of door. Fire labeled doors shall be provided as determined and scheduled by architect. Refer to door schedule for specific requirements of each door.

.2 Doors shall be blanked, reinforced, drilled and tapped for fully templated mortise hardware and factory reinforced for all surface mounted hardware as per approved hardware schedule and templates provided by hardware supplier. Drilling and tapping for surface mounted hardware or mortised hardware that is not fully templated shall be by the contractor responsible for installation on site. Where zinc coating has been removed during fabrication frames are to receive a factory applied touch-up primer. All exposed surfaces marred during shipping or installation shall be touched-up with a rust inhibitive primer.

2.3 GLAZING PANELS

.1 Unless otherwise noted, all required glass lights and glazing for screen, transoms, etc. shall be minimum 1/4" (6mm) thick glass. Doors shall be provided with 20 gauge steel glazing trim and snap-in glazing stops. For all glazing greater than 5/16" thick doors shall be provided with 20 gauge steel glazing trim and flat head counter-sunk screw fixed glazing stops. Glazing trim shall be accurately fitted, butted at corners with removable glazing stops located on the push side of the door.

End of Section
1 General

1.1 SECTION INCLUDES
.1 Wood doors, stile and rail design.
.2 Wood, panels.

1.2 RELATED SECTIONS
.1 Section ______-____________: Wood door frames.
.2 OR
.3 Section 08 12 13 - Standard Hollow Metal Frames.
.4 OR
.5 Section 08 12 14 - Custom Hollow Metal Frames.
.6 Section 08 71 00 - Door Hardware - General.
.7 Section 08 80 50 - Glass and Glazing.
.8 Section 09 91 10 - Painting: Site finishing doors.

1.3 REFERENCES
.2 CHPVA (Canadian Hardwood Plywood and Veneer Association) - Official Grading Rules for Canadian Hardwood Plywood.
.3 NHLA (National Hardwood Lumber Association).

1.4 ADMINISTRATIVE REQUIREMENTS
.1 Section 01 31 00: Project management and coordination.
.2 Coordination:
.1 Coordinate with other work having a direct bearing on work of this section.
.2 Coordinate the work with door opening construction, door frame and door hardware installation.

1.5 SUBMITTALS FOR REVIEW
.1 Section 01 33 00: Submission procedures.
.2 Product Data: Indicate stile and rail core materials and construction; veneer species, type and characteristics.
.3 Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, identify cutouts for glazing.
.4 Samples: Submit two (2) samples of door construction, ___x___ mm___x___ inch in size cut from top corner of door.
.5 Samples: Submit two (2) samples of door veneer, ___x___ mm___x___ inch in size illustrating wood grain, stain colour, and sheen.

1.6 SUBMITTALS FOR INFORMATION
.1 Section 01 33 00: Submission procedures.
.2 Manufacturer's Installation Instructions: Indicate special installation instructions.
1.7 QUALITY ASSURANCE
.
.1 Products of This Section: Manufactured to ISO 9000 certification requirements.
.2 Perform work in accordance with AWI/AWMAC Quality Standard, Premium Grade. Maintain one copy on site.
.3 Finish doors in accordance with AWI/AWMAC Quality Standard, grades identified in schedule.
.4 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years documented experience.

1.8 DELIVERY, STORAGE, AND PROTECTION
.
.1 Section 01 61 00: Transport, handle, store, and protect products.
.2 Package, deliver and store doors in accordance with AWI/AWMAC.
.3 OR
.4 Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

1.9 WARRANTY
.
.1 Section 01 78 10: Warranties.
.2 Provide warranty to the following term:
   .1 Exterior Doors: Five (5) years.
   .2 Interior Doors: Two (2) years.
.3 OR
   .1 Life of Installation: Interior and exterior doors.
.4 Include coverage for delamination of veneer.

3 Execution

3.1 EXAMINATION
.
.1 Section 01 70 00: Verify existing conditions before starting work.
.2 Verify that opening sizes and tolerances are acceptable.
.3 Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.

3.2 INSTALLATION
.
.1 Install doors to manufacturer instructions.
.2 OR
.3 Install doors in accordance with AWMAC Quality Standards requirements.
.4 Trim door width by cutting equally on both jamb edges.
.5 Trim door height by cutting bottom edges to a maximum of 75 mm 3/4 inch.
.6 Machine cut for hardware.
.7 Coordinate installation of doors with installation of frames specified in Section 08 13 13 and hardware specified in Section 08 71 00.
.8 Coordinate installation of glass and glazing.
3.3 ERECTION TOLERANCES

.1 Section 01 73 00: Tolerances.
.2 Conform to AWI/AWMAC requirements for fit, clearance, and joinery tolerances.
.3 OR
.4 Maximum Diagonal Distortion (Warp): 3 mm 1/8 inch measured with straight edge or taut string, corner to corner, over an imaginary 915 x 2130 mm 36 x 84 inch surface area.
.5 Maximum Vertical Distortion (Bow): 3 mm 1/8 inch measured with straight edge or taut string, top to bottom, over an imaginary 915 X 2130 mm 36 x 84 inch surface area.
.6 Maximum Width Distortion (Cup): 3 mm 1/8 inch measured with straight edge or taut string, edge to edge, over an imaginary 915 X 2130 mm 36 x 84 inch surface area.

3.4 ADJUSTING

.1 Adjust door for smooth and balanced door movement.
.2 Adjust closer for full closure.

3.5 SCHEDULE

End of Section
General

1.1 SECTION INCLUDES

1. Factory fabricated plastic clad wood windows with fixed sash, including infill panels.
2. Factory glazed.
3. Operating hardware and insect screens.
4. Perimeter sealant.
5. Wood trim for exterior finishing.

1.2 RELATED SECTIONS

1. Section ______-_________: Preparation of adjacent work to receive work of this section.
2. Section 06 10 13 - Wood Blocking And Curbing: Wood perimeter shims.
3. Section 07 26 00 - Vapour Retarders: Perimeter vapour seal between window frame and adjacent construction.
4. Section 07 27 00 - Air Barriers: Perimeter air seal between window frame and adjacent construction.
5. Section 07 92 00 - Joint Sealants: Perimeter sealant and back-up materials.
6. Section 08 80 50 - Glass and Glazing.
7. Section 09 91 10 - Painting: Site finishing wood surfaces.
8. Section ______-_________: Execution requirements for placement of supporting anchors.
9. Section ______-_________: Product requirements for supporting anchors for placement by this section.

1.3 REFERENCES

7. ASTM E1105-00 - Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference.
11. CSA A440.4-07 - Window, Door, and Skylight Installation.
12. WDMA I.S.4-07A - Water Repellent Preservative Treatment for Millwork.
1.4 SYSTEM DESCRIPTION
.1 Windows: Wood metal clad sections, factory fabricated, vision glass, infill panels, related flashings, anchorage and attachment devices.
.2 Configuration: Fixed, non-operable sash.
.3 Forced Entry Resistance: ASTM F588, Type ____.

1.5 PERFORMANCE REQUIREMENTS
.1 Conform to performance requirements of AAMA/WDMA/CSA/101/I.S.2/A440, Designation ____.
.2 OR
.3 System Design: Design and size components to withstand dead loads and live loads caused by positive and negative wind loads acting normal to plane of wall as calculated in accordance with ________ code.
.4 Deflection: Limit member deflection to flexure limit of glass with full recovery of glazing materials.
.5 Assembly: System to accommodate, without damage to components or deterioration of seals, movement between window and perimeter framing, deflection of lintel.
.6 Thermal Resistance of Assembly (Excluding Vision Areas): RSI value of ________.
.7 Thermal Resistance of Vision Areas: RSI value of ________.
.8 Air Infiltration: Limit air leakage through assembly to 0.0017 cu m/s/sq m 0.34 cfm/min/sq ft of wall area, measured at a reference differential pressure across assembly of 75 Pa1.57 psf as measured in accordance with ASTM E283.
.9 OR
.10 Air Infiltration: Limit air infiltration through assembly to 0.03 L/s/sq m 0.06 cfm/min/sq ft of wall area, measured at a reference differential pressure across assembly of 75 Pa1.57 psf as measured in accordance with ASTM E283.
.11 Vapour Seal: Limit vapour seal with interior atmospheric pressure of 25 mm 1 inch sp, 22 degrees C 72 degrees F, 40 percent RH without seal failure.
.12 OR
.13 Condensation Resistance Factor: CRF of ________ when measured in accordance with CSA A440.2.
.14 OR
.15 Water Leakage: None, when measured in accordance with ASTM E331.
.16 System Internal Drainage: Drain water entering joints, condensation occurring in glazing channel, or migrating moisture occurring within system, to the exterior by a weep drainage network.
.17 Air and Vapour Seal: Maintain continuous air and vapour barrier throughout assembly, primarily in line with inside pane of glass and inner sheet of infill panel and heel bead of glazing compound.

1.6 ADMINISTRATIVE REQUIREMENTS
.1 Section 01 31 00: Project management and coordination procedures.
.2 Pre-Installation Meeting: Convene one (1) week before starting work of this section.

1.7 SUBMITTALS FOR REVIEW
.1 Section 01 33 00: Submission procedures.
.2 Product Data: Provide component dimensions, anchorage and fasteners, glass, internal drainage details and ________.
.3 Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work; installation requirements; and ________.
.4 Submit two (2) samples ____x____ mm____x____ inches in size illustrating window frame
section mullion section, factory finished surfaces, glass units,

.5 Submit two (2) samples of operating hardware.

1.8 SUBMITTALS FOR INFORMATION

.1 Section 01 33 00: Submission procedures.
.2 Manufacturer’s Certificate: Certify that Products meet or exceed specified requirements.

1.9 QUALITY ASSURANCE

.1 Products of This Section: Manufactured to ISO 9000 certification requirements.
.2 Perform Work in accordance with AAMA/WDMA/CSA/101/I.S.2/A440.
.3 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years documented experience.
.4 Installer Qualifications: Company specializing in performing the work of this section with minimum three (3) years documented experience.

1.10 DELIVERY, STORAGE, AND PROTECTION

.1 Section 01 61 00: Transport, handle, store, and protect products.
.2 Protect factory finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.11 ENVIRONMENTAL REQUIREMENTS

.1 Section 01 35 26: Environmental conditions affecting products on site.
.2 Do not install sealants when ambient temperature is less than 5 degrees C/40 degrees F.
.3 Maintain this minimum temperature during and after installation of sealants.

1.12 WARRANTY

.1 Section 01 78 10: Warranties.
.2 Correct defective Work within a five (5) year period after Date of Substantial Completion.
.3 Provide five (5) year manufacturer warranty for insulated glass units from seal failure, interpane dusting or misting, and replacement of same.
.4 Warranty:
   1. Include coverage for degradation of colour finish.
   .2 Warranty: Include coverage for delamination or separation of finish cladding from window member.

2 Products

2.1 MANUFACTURERS

.1 _______________________________Model.
.2 Other acceptable manufacturers offering functionally and aesthetically equivalent products.
   .1 _______________________________Model.
   .2 _______________________________Model.
   .3 _______________________________Model.
.3 Substitutions: Refer to Section 01 62 00.
2.2 MATERIALS

.1 Wood: Clear pine species, clear preservative treated to WDMA I.S.4 of type suitable for transparent or opaque exterior finish.

.2 Plastic Cladding (Exterior Surface): ASTM D1784, Extruded PVC, low sheen surface, factory fit to profile of wood members, and exterior exposed surfaces.

.3 OR

.4 Metal Cladding (Exterior Surface): Formed aluminum, factory finished, factory fit to profile of wood members, and exterior exposed surfaces.

.5 Fasteners: Stainless steel.

2.3 COMPONENTS

.1 Frames: _____ mm____ inch wide x _____ mm____ inch deep profile; flush glass stops of screw fastened type.

.2 Mullions: _____ mm____ inch wide x _____ mm____ inch deep profile.

.3 Muntins: _____ mm____ inch wide x _____ mm____ inch deep profile.

.4 OR

.5 Simulated Muntin Panels: Formed wood construction, _____x_____ mm____x____ inch grid openings, color as selected.

.6 Sills: _____ mm____ inch nominal thickness, extruded aluminum; sloped for positive wash; fit under sash to project 12 mm1/2 inch beyond wall face; one piece full width of opening.

.7 Stools: _____ mm____ inch nominal thickness, metal clad wood; fit under sash to project 12 mm1/2 inch beyond interior wall face; one piece full width of opening.

.8 Infill Panel: Internally reinforced, glazing edge sealed permitting internal air movement to glazing space, outside air barrier line:

.1 Panel Sheet: _____ mm____ inch thick aluminum.

.9 OR

.1 Outer Face: _____ mm____ inch thick aluminum.

.2 Core: Glass fibre insulation core with RSI value of _________.

.3 Inner Face: _____ mm____ inch thick aluminum.

.10 Insect Screen Frame: Rolled aluminum frame of rectangular sections; fit with adjustable hardware; nominal size similar to operable glazed unit.

.11 Insect Screens: CAN/CGSB 79.1, woven steel mesh; 14/18 mesh size.

.12 Operable Sash Weather Stripping: Wool pile; permanently resilient, profiled to effect weather seal.

.13 Fasteners: Stainless steel.

.14 Aprons: _____ mm____ inch thick aluminum, internally reinforced, edged and sealed.

2.4 GLASS AND GLAZING MATERIALS

.1 Glass and Glazing Materials: As specified in Section 08 80 50 of Types described below:

.1 Glass in Exterior Lights: _________ Type.

.2 Glass Infill Panels: _________ Type.

2.5 SEALANT MATERIALS

.1 Sealant and Backing Materials: As specified in Section 07 92 00 of Types described below.

.1 Perimeter Sealant: _________ Type.

.2 Sealant Used Within System (Not Used for Glazing): _________ Type.

2.6 HARDWARE

.1 Horizontal Sliding Sash: Extruded PVC interfacing tracks, limit stops in head and sill track.

.2 OR

.3 Double Hung Sash: Metal and nylon spiral friction slide cylinder, each sash, each jamb.

.4 OR
Sash lock: Lever handle with cam lock. Provide _____ mm _____ feet long pole handle.

OR

Operator: Lever action handle fitted to projecting sash arms with limit stops.

Projecting Sash Arms: Cadmium plated steel, friction pivot joints with nylon bearings, removable pivot clips for cleaning.

Pulls:__________

Sash lock: Lever handle with cam lock.

2.7 FABRICATION

1. Fabricate framing, mullions and sash members with mortise and tenon joints. Glue and steel pin joints to hairline fit, weather tight.

2. Scarf joints permitted if wood matches in colour and grain texture. Finger joints acceptable in plastic clad units.

3. Form sills and stools in one piece. Slope sills for wash.

4. Form glass stops of extruded PVC to match cladding sloped for wash.

5. Provide weather stop flange for perimeter of unit.

6. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.

7. Arrange fasteners to be concealed from view.

8. Permit internal drainage weep holes and channels to migrate moisture to exterior. Provide internal drainage of glazing spaces to exterior through weep holes.

9. Assemble insect screen frame, mitre and reinforced frame corners. Fit mesh taut into frame and secure. Fit frame with four spring loaded steel pin retainers.

10. Double weatherstrip operable units.

11. Factory glaze window units.

2.8 FINISHES

1. Exterior Surfaces: Transparent as specified in Section 09 91 10.

2. Interior Surfaces: Transparent as specified in Section 09 91 10.


4. Operators:__________ baked enamel.

3 Execution

3.1 EXAMINATION

1. Section 01 70 00: Verify existing conditions before starting work.

2. Verify wall openings and adjoining air and vapour seal materials are ready to receive work of this section.

3.2 INSTALLATION

1. Install window frames, glass and glazing to manufacturer instructions.

2. OR

3. Install window assembly in accordance with CSA A440.4.

4. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.

5. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

6. Install sills, stools.

7. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
.8 Coordinate attachment and seal of perimeter air and vapour barrier materials.
.9 Install operating hardware.
.10 Install glass and infill panels in accordance with Section 08 80 50, to glazing method required to achieve performance criteria.
.11 Install perimeter sealant to method required to achieve performance criteria.

3.3 ERECTION TOLERANCES
.1 Section 01 73 00: Tolerances.
.2 Maximum Variation from Level or Plumb: 1/16 inches every 1.5 mm/m 3 ft non-cumulative or 3 mm/3 m 1/8 inches per 10 ft, whichever is less.

3.4 ADJUSTING
.1 Adjust hardware for smooth operation and secure weathertight closure.

3.5 CLEANING
.1 Section 01 74 00: Cleaning installed work.
.2 Remove protective material from factory finished surfaces.
.3 Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.
.4 Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

3.6 SCHEDULES
.1 Other Elevations (Opening No. W3, W4 and W5): Natural stain finish; 1 060 x 1 060 mm 42 x 42 inch nominal size; clear glass.

End of Section
1  General

1.1  GENERAL
.1 Read "General Requirements of the Contractor for All Specification Divisions", Section 01 01 00 which forms part of this Specification Division as though herein written out in full.

1.2  SCOPE OF WORK
.1 Supply all labour, materials, equipment and incidentals to complete the gypsum finish and steel framing or furring systems as indicated on the Drawings or Room Finish Schedule, and as specified herein, and including by not necessarily confined to:
  .1 Attachment of wall board to supports;
  .2 Fire protection and assemblies as noted or specified;
  .3 Construction for various types of bulkheads and valances;
  .4 Securement of steel frames and panels;
  .5 Seals around ducts, pipes, etc., passing through drywall;
  .6 Installation of sound attenuation insulation.

1.3  WORK EXCLUDED
.1 The following work shall be carried out by the General Contractor or his trades: floor bases; suspended acoustic ceilings. Exclude Structural "Light Member Framing" where there is an application. Refer to secondary or augmented details as required on a "per project" basis.

2  Products

2.1  MATERIALS
.1 Gypsum Wallboard - shall conform to C.S.A.A82.27, be plain gypsum panels, (thickness as noted on Drawings) edges tapered and ends cut square.
.1 At all walls requiring a fire rating
  5/8" thick board (unless listed in wall legend otherwise):
  Louisiana Pacific Fibrebond gypsum wall board with Fiber Bond Dri-Mix compound etc. as per manufacturers specifications. ULC labelled type X. Conform to CSAS2.27-Latest Edition.
  .2 Moisture Resistant Gypsum Board: 15.9 mm thick unless otherwise indicated.
  Canadian Gypsum Company (CCX) Sheetrock Brand Humitek Gypsum Panel
  .3 At all walls
  5/8" thick board (unless listed in wall legend otherwise):
  Domtar Board or GLC Sheetrock or approved equal. Conform to CAN/ CSA A82,27-Latest Edition. If standard 5/8" unavailable use type X
  .4 Drywall Screws - Screws to ASTM C646-76A type B, 3/8" min. penetration.
  .5 Tape, Joint Compound and Topping - All to ASTM C474-64, asbestos free. Also see above.
  .6 Metal Accessories - Casing beads, corner beads, 25 gauge commercial grade sheet steel with Z275 Zinc finish, shaped to receive joint compound for flush finish, perforated flanges, one-piece length per location.
  .7 Drywall Furring Channel - 25 gauge commercial grade sheet steel with G90 zinc finish,7/8" X 2-5/8" for screw attachment of gypsum board.
  .8 Drywall Furring Channel - 25 gauge commercial grade sheet steel with G90 zinc finish,7/8" X 2-5/8" for screw attachment of gypsum board.
  .9 Runner Channels - 1/16" X 3/4" X 1-1/2" steel channels with wipe coated zinc coating.
2.2 **RECYCLED CONTENT**

.1 All materials, including but not limited to steel studs, gypsum boards, glass fiber insulation blankets and mineral fiber insulation blankets shall maximize recycled (preferably post-consumer) content.

3 **Execution**

3.1 **FRAMING**

.1 Metal Studs: 63 mm, 92 mm, 150 mm electric-zinc coated sheet steel, 0.53 mm complete with floor and ceiling tracks to ASTM~ C645-88.

.2 Resilient Furring Channels: 64 mm x 12.7mm electro-zinc sheet steel. Furring Channels: 67 mm x 22 mm 25 gauge electro-zinc coated steel.

.3 Runner Channels: 38 mm x 12.7 mm, 18 gauge electro-zinc coated steel.

.4 Metal Partitions

.1 Provide partition tracks at floor and ceiling: align accurately- lay out according to partition layout, Secure at 600 mm centres maximum.

.2 Provide freedom for deflection under beams and structural slabs to avoid transmission of structural loads to the studs or install 5\(^{\text{O}}\)mm leg ceiling tracks.

3.2 **FURRING**

.1 Where wall furring is indicated, secure the drywall furring channels to wall and jambs at 16\(^{\text{o}}\) c. Provide horizontal member at floor for floor base support. Form bulkheads and valance with necessary drywall studs, furring and bracing. Provide 25 gauge galvanized steel corner and casing beads and J-type casing beads where drywall abuts window metal or other dissimilar materials.

3.3 **FASTENING**

.1 Except where otherwise specified, all drywall installation work shall conform to Domtar Brochure manual 933-R1 "Drywall on Metal Framing" (except for panel adhesive application references). Applications of multi-layer gypsum board shall be attached with screws. Do not laminate the boards with adhesives. The drywall shall be secured with Phillips flat-head power-driven screws at 8\(^{\text{o}}\) c. at edges and at 12\(^{\text{o}}\) c. at intermediate supports.

3.4 **TAPING & FINISHING**

.1 Joints shall be taped, and joints and nail-heads shall be filled flush using Gyproc (asbestos-free) joint filler, joint tape and topping cement. Finish work shall conform to the Domtar (Georgia Pacific) specifications, "application of Gyproc joint filler and topping cement". Joint compound shall be dustless compound with low VOC content. Surfaces shall be smooth and true, ready for paint finish. Face shall be straight and plumb, free of perceptible distortions and square with adjoining work.

3.5 **CLEANING**

.1 Provide for thorough cleaning of all silica/gypsum dust after the gypsum drywall is installed. Cleaning shall include, but not be limited to, all components in plenum spaces such as tops of pipes and sills, and inside and outside of ducts.

End of Section
1 General

1.1 GENERAL REQUIREMENTS
.1 Read “CCDC No. 2 2008”, “Supplements to the Contract Conditions”, and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 SECTION INCLUDES
.1 Ceramic tile wall, using the thinset application method.

1.3 RELATED SECTIONS
.1 Section 09 25 00 - Gypsum Board & Framing.

1.4 REFERENCES
.1.1 ANSI A118.1 - Specifications for Dry-Set Portland Cement Mortar.
.2 ANSI A118.3 - Specifications for Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive.
.3 ANSI A118.4 - Specifications for Latex Portland Cement Mortar.
.4 ANSI A118.6 - Specifications for Ceramic Tile Grouts.
.2 ASTM C144-04 - Specification for Aggregate for Masonry Mortar.
.3 ASTM C207-06 - Specification for Hydrated Lime for Masonry Purposes.
.4 CAN/CGSB-75. 1-M88 - Tile, Ceramic.
.6 TCA A137.1-1988 - Specifications for Ceramic Tile.
.7 TTMAC (Terrazzo Tile and Marble Association of Canada)
   .2 Maintenance Guide.

1.5 MAINTENANCE MATERIAL SUBMITTALS
.1 Maintenance and extra material requirements.
.2 Extra Stock Materials: Provide 1 sq m (10 sq ft) of each size, colour, and surface finish of tile specified.

1.6 ENVIRONMENTAL REQUIREMENTS
.1 Do not install adhesives in an unventilated environment.
.2 Maintain 10 degrees C (50 degrees F) during installation of mortar materials.

2 Products

2.1 CERAMIC WALL TILE MATERIALS
.1 Ceramic Mosaic Wall Tile: CAN/CGSB 75.1,
   .1.1 Crossville, Empire - 350 mm x 350 mm (14" x 14")
   .1 Palais, Single Bullnose
   .2 Palais, 50 mm x 50 mm (2" x 2")
   .3 Glass Blox
   .2 Applied according to drawing detail
2.2 MORTAR & ADHESIVE MATERIALS
.2 Sand: to CSA A82.56-M1976.
.4 Latex additive: formulated for use in portland cement mortar and thin set bond coat.
.5 Water: potable and free of minerals which are detrimental to mortar and grout mixes.
.6 Dry set mortar: to ANSI A118.1-1976.
.7 Thin set bond coat.

2.3 GROUT
.1 Thin set system grout: integral colour.
.2 Grout preparation: to manufacturer's instructions.

2.4 ACCESSORIES
.1 Colour selected by Consultant.

2.5 MORTAR AND ADHESIVE MIXES
.1 Bond or setting coat: 1 part portland cement, 1/3 part hydrated lime, 1 part water.
.2 Measure mortar ingredients by volume.
.3 Dry set mortar: mix to manufacturer's instructions.

3 Execution

3.1 EXAMINATION
.1 Verify existing conditions before starting work.
.2 Verify that surfaces are ready to receive work.

3.2 PREPARATION
.1 Protect surrounding work from damage or disfiguration.
.2 Vacuum clean surfaces and damp clean.
.3 Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
.4 Apply sealer to substrate surfaces in accordance with adhesive manufacturer's written instructions.

3.3 INSTALLATION
.1 Install in accordance with TTMAC detail 2006-2007.
.2 Install adhesive tile, thresholds, and grout in accordance with manufacturer's written instructions.
.3 Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
.4 Cut and fit tile tight to penetrations through tile. Form corners and bases neatly. Align floor, base and wall joints.
.5 Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
.6 Form internal angles square and external angles bullnosed.
.7 Install ceramic accessories rigidly in prepared openings.
.8 Sound tile after setting. Replace hollow sounding units.
.9 Keep expansion joints free of adhesive or grout. Apply sealant to joints.
.10 Allow tile to set for a minimum of 48 hours prior to grouting.
.11 Grout tile joints.
.12 Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.
3.4 CLEANING

.1 Clean installed work.
.2 Clean tile and grout surfaces.

End of Section
1 General

1.1 GENERAL
.1 Read "CCDC No. 2 2008", "Supplements to the Contract Conditions", and all Appendices, which form part of this Specification Division as though herein written out in full, as general instructions for all specification parts and divisions.

1.2 SCOPE OF WORK
.1 Furnish all labour, materials and equipment necessary to complete the vinyl composite floor tiled areas denoted 'VS' Vinyl Sheet Flooring and rubberized base where noted on the Drawings and room finish schedule. Clean and seal the new flooring and base. Where new work occurs on an existing substrate remove existing carpet, ceramic tile, vinyl tile or sheet goods and prepare substrate for new flooring (concrete). This trade shall provide trowel applied "localized" floor filler where the concrete surface is irregular.

1.3 WORK EXCLUDED
.1 The concrete, specified underlayment (if any) and other types of finish flooring will be done by other trades. Large area "floor leveling" if required shall be carried out by the pre-stressed concrete slab installer using an approved skim coat (liquid floor leveling compound).

2 Products

2.1 MATERIALS
.1 VS shall be Polyflor flooring denoted by types:

   POLYFLOR EXPONA Commercial Linoleum Sheet Flooring.

.2 All floor surfaces shall have rubberized base (see Base notes).
.3 Adhesive - as supplied by flooring manufacturer for application.
.4 Crack Filler - shall be Mannington or approved equal. For dusty concrete areas, use product as recommended by Flooring Manufacturer.
.5 Base
   For flooring areas, the base shall be rubber as manufactured by "Roppe" and from their full range of colours. Unless noted otherwise, the height of rubberized base shall be 4".

3 Execution

3.1 PREPARATION
.1 Before commencing, prime surface and fill cracks, joints, etc., with the filler to give a smooth, unbroken surface for sheet goods. Make good any defective seam or joints.
.2 Inspect all surfaces and report defects in writing to the Architect before commencing work. Commencement of the work indicates acceptance of surfaces. Take moisture tests of concrete floor to verify complete dryness before commencing work. Ensure that 70 degrees F temperature is maintained by the General Contractor for 48 hours before laying tile or sheet goods and 48 hours after completion.
.3 All materials shall be laid and applied by certified installer according to the manufacturer’s specification for each surface and condition.

3.2 INSTALLATION
.1 Install flooring as per Manufacturer’s Specifications. All seams to match colour and texture of existing.
3.3 **WARRANTY**

.1 The installer shall warrant installation for a period of one year from uplift, delaminating and seam separation.

3.4 **CLEANING, STRIPPING, SEALING & WAXING**

.1 Remove excess adhesive with damp sponge from seams as work progresses, and wipe clean and dry with cloth towel. Leave complete work smooth, clean, without wrinkles, gaps, overlaps or air pockets. Clean the floor, free of any films, etc and base seal flooring if applicable.

Apply 5 coats of a high-quality commercial floor polish such as Armstrong S-480 floor polish or approved equal.

3.5 **INSPECTION**

.1 Before starting work, inspect all surfaces to be painted, and report all defects to the General Contractor. Commencement of work by this trade indicates his acceptance of the surfaces.

3.6 **WORKMANSHIP**

.1 All work shall be done by qualified tradesmen and in accordance with Chapter. 6, Architectural Guide, of the CPCA manual. Painted surfaces shall be free of runs, crawls, sags or other defects, and all finishes shall be uniform in texture, colour and sheen.

Where the number of coats specified does not cover completely, further coats shall be applied. During progress of the job, prime coat surfaces for protection as the General Contractor may direct. Doors shall be coated, top and bottom. All prime or first coats will be colour tinted. Surfaces shall be sanded lightly with #200 paper between coats. Temperature shall be above 60º F during and 48 hours after paint application.

3.7 **CLEANING**

.1 Make good any damage of finish by other trades. As work proceeds and upon completion, promptly remove all paint where spilled or splattered on all surfaces and hardware, and leave the premises neat and clean.

End of Section
1 General

1.1 GENERAL
  .1 Read GEN REQ, "General Requirements of the Contractor for All Specification Divisions", which forms part of this Specification Division as though herein written out in full.

1.2 SCOPE OF WORK
  .1 Provide all labour, materials, equipment, tools and services to complete the work of this Section as shown on the Drawings and specified herein, to the satisfaction of the Owner or Architect.

1.3 WORK EXCLUDED
  .1 Exterior aluminum doors (except for new steel doors & frames) and window frames, pre-finished fascia or soffit; acoustic ceilings; prefinished cupboards and counters; baseboard; factory finished grilles. Areas not noted for finish on the Room Finish Schedule and Door and Frame Schedule.

1.4 REFERENCE STANDARDS
  .1 Materials and workmanship, and all items affecting the work shall be in accordance with Canadian Paint and Coatings Association (CPCA) Architectural Painting Specifications Manual and CAN2-85.100 with a certificate of compliance with the standards named and a record of materials used on the project.

2 Products

2.1 MATERIAL
  .1 All materials shall be delivered to the building in the original containers, with labels intact and seals unbroken, and stored in a suitable environment, where materials will be protected from damage by weather and other causes. All primer, paint, stain and varnish materials shall be ready-mixed and manufactured by Pratt & Lambert, ICI Paints, Benjamin Moore Co, Ltd., Sherwin-Williams Co., or approved equal. All colours will be selected by the Owner or Architect, and are to match exactly those indicated on Finish Schedule. Samples may be required before application.

3 Execution

3.1 INSPECTION
  .1 Before starting work, inspect all surfaces to be painted, and report all defects to the General Contractor. Commencement of work by this trade indicates his acceptance of the surfaces.

3.2 PREPARATION
  .1 Provide sufficient, impermeable drop sheets and other protective equipment to prevent splatter or droppings, and protect the work of other trades from damage resulting from work of this section. Remove all electrical plates, surface hardware, fittings and fastening, prior to paint application; Store and replace these items upon completion of work. Thoroughly vacuum clean and prepare surfaces to be painted in accordance with Chapter 6, Architectural Guide, of the CPCA manual. Provide an "air scrubber" system approved by Brock University.
3.3 WORKMANSHIP

.1 All work shall be done by qualified tradesmen and in accordance with Chapter. 6, Architectural Guide, of the CPCA manual. Painted surfaces shall be free of runs, crawls, sags or other defects, and all finishes shall be uniform in texture, colour and sheen. Where the number of coats specified does not cover completely, further coats shall be applied. During progress of the job, prime coat surfaces for protection as the General Contractor may direct. Doors shall be coated, top and bottom. All prime or first coats will be colour tinted. Surfaces shall be sanded lightly with #200 paper between coats. Temperature shall be above 60º F during and 48 hours after paint application.

3.4 CLEANING

.1 Make good any damage of finish by other trades. As work proceeds and upon completion, promptly remove all paint where spilled or splattered on all surfaces and hardware, and leave the premises neat and clean.

3.5 PAINTING SCHEDULE

.1 Note: For Specific materials, see item 5. See Room Finish Schedule and Door & Frames Schedule for materials requiring finish. * for all LEED approved formulas, specified products must meet GS-11 environmental product criteria.

<table>
<thead>
<tr>
<th>SURFACE</th>
<th>STANDARD FORMULA</th>
<th>LEED approved Formula</th>
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<tbody>
<tr>
<td><strong>INTERIOR SURFACES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete block</td>
<td>CPCA (OPCA) System - INT 8-A</td>
<td>Use Standard formula*</td>
</tr>
<tr>
<td>walls</td>
<td>One Coat Latex Blockfiller - OPCA #4</td>
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<td></td>
<td>Two coats Latex Semi-Gloss - OPCA</td>
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<td>#54 or 133</td>
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<tr>
<td>Concrete block</td>
<td>CPCA (OPCA) System - INT 8-B</td>
<td>LEED - USE DULUX</td>
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<tr>
<td>walls</td>
<td>One Coat Latex Blockfiller - OPCA #4</td>
<td>ADVANCE ALKYD</td>
</tr>
<tr>
<td></td>
<td>Two coats Alkyd Semi-Gloss - OPCA#47</td>
<td>SEMI-GLOSS # 1506</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Available as a special order)</td>
</tr>
<tr>
<td>Concrete block</td>
<td>CPCA (OPCA) System - INT 8-B</td>
<td>LEED - USE ICI DULUX</td>
</tr>
<tr>
<td>block walls</td>
<td>One coat Latex Blockfiller - OPCA #4</td>
<td>ADVANCED ALKYD EGG-</td>
</tr>
<tr>
<td></td>
<td>Two coats Alkyd Eggshell - OPCA #51</td>
<td>SHELL #1502 - (Available as a special order)</td>
</tr>
<tr>
<td>Gypsum board walls</td>
<td>CPCA (OPCA) System - INT 4-B Special</td>
<td>No current LEED standard</td>
</tr>
<tr>
<td>(flat finish)</td>
<td>One coat Latex Primer Sealer-OPCA#50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two coats Latex High Performance Flat Finish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ICI Dulux Diamond Matte 12110 Series</td>
<td></td>
</tr>
<tr>
<td>Gypsum board walls</td>
<td>CPCA (OPCA) System - INT 4-B</td>
<td>Use standard formula *</td>
</tr>
<tr>
<td>(eggshell finish)</td>
<td>One coat Latex Primer Sealer-OPCA#50</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>CPCA (OPCA) System - INT 4-A</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Gypsum board walls (semi-gloss finish)</td>
<td>One coat Latex Primer Sealer - OPCA#50 Two coats Latex Semi-Gloss - OPCA #49 One coat Latex Primer Sealer - OPCA#50 Two coats Latex Semi-Gloss - OPCA #49</td>
<td></td>
</tr>
<tr>
<td>Gypsum board ceilings</td>
<td>One coat Latex Primer Sealer - OPCA#50 Two coats Latex Flat - OPCA #49</td>
<td></td>
</tr>
<tr>
<td>Woodwork to receive painted</td>
<td>Two coats Alkyd Semi-Gloss - OPCA#47 One coat Stain Blocking or Latex Semi-Gloss - OPCA#54 or 133 Adhesion Promoting Primer (Water Borne) - OPCA #17 Two coats Latex Semi-Gloss - OPCA #54 or 133</td>
<td></td>
</tr>
<tr>
<td>Woodwork to receive stained finish</td>
<td>One coat Polyurethane (reduced) - OPCA #56, 57, or 93 Three coats Water-borne Polyurethane Clear Two coats Polyurethane-OPCA 56, 57 or 93</td>
<td></td>
</tr>
<tr>
<td>Woodwork to receive natural</td>
<td>One coat Polyurethan (reduced) - OPCA #56, 57 or 93 Three coats Water-borne Polyurethane Clear Two coats Polyurethane-OPCA 56, 57 or 93</td>
<td></td>
</tr>
<tr>
<td>Primed ferrous Metals</td>
<td>One coat Alkyd Metal Primer - OPCA#24 One coat Latex Dryfall- [S/G Finish] or #49 (Flat Finish) OPCA #118</td>
<td></td>
</tr>
</tbody>
</table>

High Traffic Surfaces - Recommend a S/G finish for high traffic surfaces and Flat for ceiling.
<table>
<thead>
<tr>
<th>Areas</th>
<th>Custom System *</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat high performance Primer</td>
<td>OPCA # 3</td>
</tr>
<tr>
<td>Two coats Latex S/G -</td>
<td>OPCA #54 or 133</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Galvanized and zinc coated metal</th>
<th>CPC (OPCA) System - INT 13-A System - INT 13-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat Galvanized Primer (Solvent Based) - OPCA #26 or 76</td>
<td>One coat Galvanized (Water Borne) - OPCA #61</td>
</tr>
<tr>
<td>Two coats Alkyd Semi-Glass - OPCA #47 (S/G Finish) or #49 (Flat Finish)</td>
<td>Two coats Latex S/G - OPCA #54 or 133 or Flat #53 &amp; 131</td>
</tr>
<tr>
<td>Recommend a S/G finish for high traffic surfaces and Flat for ceiling areas</td>
<td>Recommend a S/G finish for high traffic surfaces and Flat for ceiling areas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Or for ceiling and duct work areas - System - INT 13-E</th>
<th>Or for ceiling and duct work areas k - System - INT 13-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat Alkyd Primer - OPCA #26 or 76</td>
<td>INT 13-F</td>
</tr>
<tr>
<td>One coat Alkyd Dryfall - OPCA #55</td>
<td>One coat Galvanized (Water Borne) - OPCA #118</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation covering</th>
<th>CPC (OPCA) System INT 5-A System - INT 5-C *</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat Latex Primer Sealer - OPCA #26 or 76</td>
<td>One coat Latex Primer - OPCA #50</td>
</tr>
<tr>
<td>One coat Alkyd Primer - OPCA #26 or 76</td>
<td>Two coats Latex S/G - OPCA #54 or 133</td>
</tr>
<tr>
<td>One coat Alkyd Dryfall - OPCA #55</td>
<td>#554 or 133</td>
</tr>
</tbody>
</table>

**EXTERIOR SURFACES**

<table>
<thead>
<tr>
<th>Wood to receive</th>
<th>CPC (OPCA) System - EXT 11-A CPC (OPCA) System EXT 11-G</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat Alkyd Metal Primer - OPCA #24</td>
<td>One coat Rust Inhibitive Primer (Water-based) - OPCA #128</td>
</tr>
<tr>
<td>Two coats Alkyd Gloss - OPCA #9</td>
<td>Two coats Latex - OPCA #10, 11 or 119</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primed Ferrous Metal</th>
<th>CPC (OPCA) System - EXT 11-A CPC (OPCA) System EXT 11-G</th>
</tr>
</thead>
<tbody>
<tr>
<td>One coat Alkyd Metal Primer - OPCA #24</td>
<td>One coat Alkyd Metal Primer - OPCA #24</td>
</tr>
<tr>
<td>Two coats Alkyd Gloss-OPCA #9</td>
<td>One coat Rust Inhibitive Primer (Water-based)</td>
</tr>
<tr>
<td>Two coats Latex-OPCE #10, 11 or 199</td>
<td></td>
</tr>
<tr>
<td>Galvanized CPCA (OPCA) System - EXT 12-A</td>
<td>CPCA (OPCA) System</td>
</tr>
<tr>
<td>and zinc coated One coat Galvanized Primer (Solvent Based) - OPCA #26 or 76</td>
<td>One coat Galvanized Primer (Water Borne) - OPCA #61</td>
</tr>
<tr>
<td>Two coats Alkyd Gloss - OPCA #9</td>
<td>Two coats Latex - OPCA #10, 11 or 119</td>
</tr>
</tbody>
</table>

End of Section