INDEX TO SPECIFICATIONS

Central Lake Ontario Conservation Authority

CLOCA Russ Powell Centre Washroom and Maintenance Shed
AT
7274 Holt Road North
Enniskillen, Ontario.

PART 1: THE PROJECT SPECIFICATIONS MANUAL

VOLUME 1 ARCHITECTURAL
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END OF SECTION 00010

1. This Section to be completed before signing of Contract.

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2.1 Agreement Between Owner and Contractor: Standard Construction Document, CCDC 2, 2020, Stipulated Price Contract.

END OF SECTION 00510

LIST OF CONTENTS

1. PERFORMANCE BOND

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END OF SECTION 00600

1. LIST OF CONTENTS

1.1 DEFINITIONS OF CCDC2, 2020, STIPULATED PRICE CONTRACT

1.3 GENERAL CONDITIONS OF CCDC2, 2020, STIPULATED PRICE CONTRACT

1.3.1 Definitions and General Conditions are modified by the Supplementary Conditions, (SC) as set forth in section 00800.

END OF SECTION 00700

Supplementary Conditions for the Stipulated Price Contract –CCDC 2-2020

The Standard Construction Document for CCDC 2 Stipulated Price Contract, 2020 English version, consistingof the Agreement Between *Owner* and *Contractor*, Definitions, and General Conditions of the Stipulated PriceContract, Parts 1 to 13 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.

Where a General Condition or paragraph of the General Conditions of the Stipulated Price Contract is deletedby 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

AMENDMENTS TO AGREEMENT

ARTICLE A-5 PAYMENT

.1 In paragraph 5.1.1 of Article A-5 add the following words to the end:
"or, where there is no *Payment Certifier*, jointly by the *Owner* and *Contractor*"

ARTICLE A-6 RECEIPT AND ADDRESSES FOR NOTICES IN WRITING

.1 Delete paragraph 6.5 of Article A-6 in its entirety and replace it with the following:

6.5 Contact information for a party may be changed by *Notice in Writing* to the other partysetting out the new contact information in accordance with this Article.

AMENDMENTS TO DEFINITIONS

.1 Add the following definition: Proper Invoice
Proper Invoice means a "proper invoice" as defined in the *Payment Legislation*, if any, and asmay be modified by written agreement between the parties to the extent permitted by such *Payment Legislation*.

Add the following definition: Submittals
Submittals are documents or items required by the *Contract Documents* to be provided by the *Contractor* such as:
Shop Drawings, samples, models, 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 andmaintenance of the Work.

SUPPLEMENTARY CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

Delete paragraphs 1.1.3 and 1.1.4 in their entirety and replace them with the following:

1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating and co-ordination and execution of the *Work* by the *Contractor.* The *Contractor* shallreport promptly to the *Consultant* any ambiguities, design issues or other matters requiring clarification made known to the *Contractor* or that the *Contractor* may discover from such a review. Such review by the *Contractor* shall comply with the standard of care described in paragraph 3.9.1 of the *Contract*.

1.1.4 Except for its obligation to review the *Contract Documents* and report the result pursuant to

paragraph 1.1.3, the *Contractor* is not responsible for ambiguities, designissues or other matters requiring clarification in the *Contract Documents* and does notassume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. Without limiting the foregoing, the *Contractor* shall not be liable for any damages or costs resulting from any ambiguities, design issues or other matters requiring clarification in the *Contract Documents* which the *Contractor* could not reasonably have discovered from such a review in accordance with the standard of care. If the *Contractor* does discover any ambiguities, design issues or other matters requiring clarification in the *Contract Documents,* the *Contractor* shall not proceed with the work affected until the *Contractor* has received modified or additional information from the *Consultant*. The impacts of any ambiguities, design issues or other matters requiring clarification in the *Contract Documents*, including to the *Contract Price* and *Contract Time*, shall be addressed by the parties in accordance with Part 6 – CHANGES."

Add the following to the end of subparagraph 1.1.6.2:

Except to the extent the *Consultant* is indemnified as a third party beneficiary as provided in subparagraphs 9.2.7.4 and 9.5.3.4 and in paragraph 13.1.3.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.2 ROLE OF THE CONSULTANT

In paragraph 2.2.3 add the following to the end:

"Without limiting the foregoing, the *Consultant* may appoint one or more authorized representatives in writing who may fulfill the obligations of the *Consultant* under this *Contract*."

In paragraph 2.2.8 add the words ", written statements" after the word "interpretations" in boththe first and second sentences; and add the following to the end of paragraph 2.2.8:

The *Owner* and the *Contractor* shall waive any claims against the *Consultant* arisingout of its making of any interpretations, written statements or findings in accordancewith paragraphs 2.2.6, 2.2.7, 2.2.8, and 7.1.2, but only to the extent that any such interpretations, written statements, and findings are made by the *Consultant* in an unbiased manner, and in accordance with the *Consultant*'s professional standard of care at law.

In paragraph 2.2.13 add the words "which are provided" before the words "by the *Contractor*".

GC 2.4 DEFECTIVE WORK

In paragraph 2.4.1:

Add after the words "shall promptly correct" the phrase "in a manner acceptable to the *Owner* and the *Consultant*"; and Add after the words "*Contract Documents*" the phrase "or work that the *Contractor*discovers to be defective, whether or not the defective work had been identified bythe *Consultant*, and".

Add new paragraph 2.4.4 as follows:

2.4.4 The *Contractor* shall prioritize the correction of any defective work which, in the solediscretion of the *Owner*, adversely affects the day-to-day operation of the *Owner*.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

.1 Add new paragraph 3.1.3 as follows:

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.

GC 3.2 CONSTRUCTION BY OWNER AND OTHER CONTRACTORS

.1 Add new paragraph 3.2.7 as follows:

3.2.7 At the commencement of the *Work*, the *Contractor* shall prepare for the review and acceptance of the *Owner* and the *Consultant,* a schedule indicating the times, within the construction schedule referred to in GC 3.4, that 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*.

GC 3.7 LABOUR AND PRODUCTS

Add the following to the end of paragraph 3.7.1:

The *Contractor* represents that it has sufficient skilled employees to replace, subject to the *Owner*'s approval, acting reasonably, its designated supervisor and project manager in the event of death, incapacity, removal or resignation.

Add new paragraphs 3.7.4 and 3.7.5 as follows:

The *Owner* shall provide the *Contractor* in a timely manner with all relevant information (including storage, protection, and installation requirements) regarding *Products* to be supplied by the *Owner* or other contractors and, prior to delivery of any such *Products* to the *Place of the Work*, the *Owner* shall obtain the *Contractor*'s written approval of the delivery date and proposed storage, protection and installation requirements.

Once the *Contractor* has accepted delivery of *Products*, the *Contractor* shall be responsible for the safe storage and protection of *Products* as required to avoid dangerous conditions or contamination to the *Products* or other persons or property. *Products* shall be stored in locations and at the *Place of the Work* to the satisfaction of the *Owner* and the *Consultant* as agreed and approved by the *Contractor* pursuant to paragraph 3.7.4. Notwithstanding the foregoing, the *Contractor* shall not be responsible for any *Products* supplied by the *Owner* or other contractors unless:

the *Contract Documents* expressly stipulate that such *Product* is to be the *Contractor*'s responsibility and to be installed by the *Contractor* as part of the *Work*;

the *Contractor* has or has received from the *Owner* proof of insurance coverage sufficient, at a minimum, to cover the replacement cost of such *Product*; and

the *Owner* obtained the *Contractor*'s approval as required by paragraph 3.7.4.

GC 3.8 SHOP DRAWINGS

Add the words "AND OTHER SUBMITTALS" to the title of GC 3.8 after the words "SHOP DRAWINGS".

Add the words "and *Submittals*" after the words "*Shop Drawings*" in paragraphs 3.8.1, 3.8.2, 3.8.3, 3.8.3.2, 3.8.5, 3.8.6, and 3.8.7.

Delete paragraph 3.8.2 in its entirety and replace it with new paragraph 3.8.2 as follows:

3.8.2 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 *Submittals* in an orderly sequence.

Delete the words “with reasonable promptness so as to cause no delay in the performance ofthe Work” and replace them with the words “within 10 *Working Days* or such longer period asmay be reasonably required” in paragraph 3.8.7.

GC 3.9 PERFORMANCE BY CONTRACTOR

.1 Add new General Condition GC 3.9 as follows:

GC 3.9 PERFORMANCE BY CONTRACTOR

3.9.1 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* shallexercise the same standard of due care and diligence in respect of any *Products*, personnel, or procedures which it may recommend to the *Owner*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

Delete paragraph 4.1.7 in its entirety and replace it with the following:

At the commencement of the *Work*, the *Contractor* shall prepare for the review and acceptance of the *Owner* and the *Consultant* a schedule indicating the times within the construction schedule referred to in GC 3.4 that items called for under cash allowances are required to be delivered to the *Place of the Work* to avoid delaying theprogress of the *Work*.

Add new paragraph 4.1.8 as follows:

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

PART 5 PAYMENT

GC 5.2 APPLICATIONS FOR PAYMENT

.1 Delete the word “first” in paragraph 5.2.7 and replace it with the word “second.”

GC 5.4 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

.1 Delete all paragraphs of GC 5.4 in their entirety and replace them with the followingparagraphs: When the *Contractor* considers that the *Work* is substantially performed, or if permitted by the lien legislation applicable to the *Place of the Work* a designated portion thereof which the *Owner* agrees to accept separately is substantially performed, the *Contractor* shall, within five (5) *Working Days*, deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for a review by the *Consultant* to establish *Substantial Performance of the Work* or substantial performance of the designated portion of the *Work*. Failure to include an item on the list does not alter theresponsibility of the

Contractor to complete the *Contract*.

The *Consultant* will review the *Work* to certify or verify the validity of the applicationand shall promptly, and in any event, no later than 10 calendar days after receipt ofthe *Contractor*'s application:

advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or state the date of *Substantial Performance of the Work* or a designated portionof the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*. Where the holdback amount required by the applicable lien legislation has not beenplaced in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bankaccount in the joint names of the *Owner* and the *Contractor*. Subject to the requirements of any *Payment Legislation*, all holdback amounts prescribed by the applicable lien legislation for the *Place of the Work* shall becomedue and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, as certified or verified by the *Consultant* when permitted by any*Payment Legislation*. The *Contractor* shall submit an application for release of the lien holdback amount in accordance with the lien legislation applicable to the *Place of the Work*. Except to theextent required by any *Payment Legislation*, such application for release of the holdback shall not constitute an application for payment that is subject to *Proper Invoice* requirements. Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release the holdback for such portion of the *Work* to the *Contractor*in accordance with such legislation. Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate forpayment or until the *Owner* takes early occupancy in accordance with GC12.2, whichever comes first, and shall be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

Add to the end of paragraph 5.5.1 the following sentence:

The application for final payment shall meet the requirements of a *Proper Invoice*.

Add the following to the end of paragraph 5.5.3:

Subject to any *Payment Legislation*, when the *Consultant* finds the *Contractor's* application forfinal payment to be not valid, the *Contractor* shall revise and resubmit the application when the *Contractor* has addressed the reasons given by the *Consultant*.

PART 6 CHANGES IN THE WORK

GC 6.3 CHANGE DIRECTIVE

Delete the word "and" from the end of subparagraph 6.3.7.17.

Delete the period from the end of subparagraph 6.3.7.18 and replace it with "; and".

Add new subparagraph 6.3.7.19 as follows:

.19 safety measures and requirements.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

.1 Add new paragraph 6.4.5:

6.4.5 The *Contractor* confirms that, prior to bidding the *Project*, it carefully reviewed the *Place of the Work* and applied to that review the degree of care and skill described inparagraph 3.9.1, 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 orto an extension of the *Contract Time* for conditions which could reasonably have been ascertained by the *Contractor* by such review undertaken in accordance with this paragraph 6.4.5.

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 6.6.5and add the words “and the *Consultant*”, at the end of paragraph 6.6.5.

PART 8 DISPUTE RESOLUTION

GC 8.3 ADJUDICATION

.1 Delete the word “prescribed” from paragraph 8.2.1 and substitute the words “provided for”.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

.1 Add the following new paragraphs 8.3.9 to 8.3.13:

Within five days of receipt of the notice of arbitration by the responding party underparagraph 8.3.6, the *Owner* and the *Contractor* shall give the *Consultant* a written notice containing:
a copy of the notice of arbitration;
a copy of supplementary conditions 8.3.9 to 8.3.14 of this *Contract*, and;
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.

The *Owner* and the *Contractor* agree that the *Consultant* may elect, within ten days ofreceipt of the notice under paragraph 8.3.9, to become a full party to the arbitration under paragraph 8.3.6 if the *Consultant*:
has a vested or contingent financial interest in the outcome of thearbitration;
gives the notice of election to the *Owner* and the *Contractor* before the arbitratoris appointed;
agrees to be a party to the arbitration within the meaning of the rulesreferred to inparagraph 8.3.6, and,
agrees to be bound by the arbitral award made in thearbitration.
Without limiting and subject to the *Owner* and *Contractor*’s rights under paragraph
to challenge whether the *Consultant* has satisfied the requirements ofparagraph 8.3.10, if an election is made under paragraph 8.3.10:
the *Owner* or *Contractor* may request particulars and evidence of the *Consultant*’s vested or contingent financial interest in the outcome of thearbitration;
the *Consultant* shall participate in the appointment of the arbitrator; and,
notwithstanding the rules referred to in paragraph 8.3.6, the time period forreaching agreement on the appointment of the arbitrator shall begin to run from the date the respondent receives a copy of the notice of arbitration.

The arbitrator in the arbitration in which the *Consultant* has elected under paragraph
8.3.10 to become a full party may: on application of the *Owner* or the *Contractor*, determine whether the *Consultant* has satisfied the requirements of paragraph 8.3.10, and; make any procedural order considered necessary to facilitate the addition of the *Consultant* as a party to the arbitration.
The provisions of paragraph 8.3.9 shall apply (with all appropriate changes beingmade) to written notice to be given by the *Consultant* to any sub-consultant.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

Delete subparagraph 9.1.1.1 in its entirety and replace it with the following:

9.1.1.1 errors or omissions in the *Contract Documents* which the *Contractor* could not havediscovered applying the standard of care described in paragraph 3.9.1;

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

9.1.2 Before commencing any *Work*, the *Contractor* shall determine the locations of all underground utilities and structures indicated in the *Contract Documents*, or that are discoverable by applying to an inspection of the *Place of the Work* the degree of careand skill described in paragraph 3.9.1.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

Add the following words to paragraph 9.2.6 after the word "responsible":
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 whomthe *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,

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

Add the following words to paragraph 9.2.8 after the word "responsible":
or that any toxic or hazardous substances or materials already at the *Place of the Work* (andwhich 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,

GC 9.5 MOULD
.1 Add the words "and the *Consultant*" after the word "*Contractor*" in subparagraph 9.5.3.4.

PART 10 GOVERNING REGULATIONS

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 3.9.1, the".

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

.1 After the second occurrence of the term "*Ready-for-Takeover*" insert before the term "*Ready-for-Takeover*" in paragraph 12.1.3 the words "determination of".

GC 12.2 EARLY OCCUPANCY BY THE OWNER

.1 Delete the word "achieve" in paragraph 12.2.4 and replace it with the words "have achieved".

GC 12.3 WARRANTY

.1 Delete the word “The” from the first line of paragraph 12.3.2 and replace it with the words"Subject to paragraph 3.9.1, the ".

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

Add new paragraph 13.1.0 as follows:

The *Contractor* shall indemnify and hold harmless the *Consultant*, its agents and employees from and against all 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 ordestruction of tangible property, and
caused by negligent acts or omissions of the *Contractor* or anyone for whosenegligent acts or omissions the *Contractor* is liable, and made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter such period as may be prescribed byany limitation statute or the Province or Territory of the *Place of Work.*

Add the words “13.1.0,” after the word “paragraphs” in paragraph 13.1.3.

END OF SECTION 00800

APPENDIX 'B'

SITE SUPERINTENDENT'S QUALIFICATION STATEMENT

NAME OF PROPOSED SITE SUPERINTENDENT:

_____

Years of Experience with Contractor's Company: _____

RELATED PROJECT EXPERIENCE (LAST 5 YEARS)

Year	Description of Contract	Name of Contractor	Value

References Contractor would suggest Consultant contact regarding Superintendent's ability to supervise and complete the work:

Name	Project	Telephone No.

1. Additions, deletions and additional instructions in all amendments apply to and govern the Contract Documents in accordance with GC1 as amended by the Supplementary Conditions.

2. LIST OF CONTENTS

ADDENDUM NO.	PAGES	DATE INCLUDED:	AMENDMENT DRAWINGS

END OF SECTION 00900

PART 1 WORK OF THIS CONTRACT

1.1 Shall include but not be limited to:

1.2 WORK INCLUDED

1.2.1 Provide Temporary barriers and protection.

1.2.2 Contractor shall provide temporary dust tight barriers to isolate the active work zones from the occupied nature centre assembly area.

1.2.3 Provide full time site supervision throughout the duration of the project.

1.2.4 Contractor is responsible for the design and installation of all temporary engineered shoring at existing wall cutting and patching locations as required by the work.

1.2.5 Contractor shall prepare and submit biweekly construction schedule and submit to the owner and the consultant at the biweekly site meetings. Shop drawing submittals shall be submitted to the consultant within 10 days of contract award.

1.2.6. Provide means " Supply and Install"

1.2.7 Provide temporary barriers, protection, utilities, security, controls and services

1.2.8 Provide:
Selective demolition, cast in place concrete, concrete finishing, masonry cutting and patching, rough carpentry, finish carpentry, metal stud systems, suspended ceiling suspension systems, gypsum board wall and ceiling finishes, metal doors and frames, finish hardware, power door power door operators, porcelain tile floor and wall finishes, joint sealants, cutting and patching existing exterior masonry wall as required to install new sanitary exhaust louvre, cutting and patching of existing metal roofing for new sanitary stack jack flashing , cutting and patching of existing ceiling insulation at new construction interface with existing construction, finish painting , washroom accessories, hand dryers, electrical modifications to existing washrooms and entry vestibules, relocation of existing light fixtures, new recessed led light fixtures, new receptacles, new wall mounted elect force flow heater, power supplies for new elect devices and hand dryers, occupancy sensors , breakers for new circuits in existing storage room elect panel, ESA permit fee , mechanical alterations to the alteration areas , new sanitary exhaust system, plumbing fixtures, below grade sanitary drainage services, domestic water modifications, plumbing modifications within the existing storage room , pipe insulation , new shut off valves, new wash fountain, new lav, as indicated on the drawings and as herein specified.

1.2.9 Refer to the architectural drawings for the electrical modifications.

1.2.10 Contractor shall maintain protective coverings over the existing wall graphic which is scheduled to remain.

1.2.11 Contractor shall provide the mechanical demolition on elements of existing mech plumbing and Sanitary exhaust as set forth on the mechanical drawings.

1.2.12 Contractor shall provide temporary heat, power, lighting, sanitary facilities, telephone and weather protection throughout the duration of construction.

1.2.13 Provide all cutting and patching as required to fit new construction to existing construction.

1.2.14 Saw-cutting of masonry shall be wet saw equipment to mitigate concrete dust. This is mandatory.

1.2.15 Division 16 is responsible for the costs of obtaining the ESA permit, ESA inspections and certificate; independent verification of all fire alarm devices installed or modified during execution of the work of this contract, testing and certification of the emergency lighting.

1.2.16 **Receive** means unload and transport on site and store within the alteration area. Provide onsite secure containers for storage of the finish hardware, doors and frames.

1.2.17 All of the above as shown or described on the drawings and as hereinafter specified.

1.3 WORK NOT IN THIS CONTRACT

1.3.1 . The Owner will apply and pay for the building permit.

1.4 HOURS OF WORK

1.4.1 Normal working hours. Contractor may work from 6:00 am – 7:00 pm Monday to Friday. Saturday 6:00 am – 7:00 pm at their option. Sundays – refer to Clarington noise bylaw.

PART 2 GENERAL REQUIREMENTS

2.1.1 The Work involves sequential occupancy of sections of the Work. Timing of the Work of this contract shall be as set forth in the Instructions to Bidders and the Tender Form. It is the intent of these documents that, the Contractor shall promptly organize and co-ordinate shop drawing submittals within 10 days of contract award to ensure achievement of the stipulated occupancy date.

2.1.2 Conform to all Divisions and all parts of all Divisions of the Contract Documents commencing with Division 00, Bidding and Contract Requirements.

2.1.3 Notes on the drawings supplement the specifications subject to the General and Supplementary Conditions of the Contract.

2.1.4 Wherever the words, "approved", "satisfactory", "directed" "permitted", "inspected", "instructed", "required", "submit", "ordered", or similar words or phrases are used in the Contract Documents, it shall be understood, unless the context provides otherwise, that "by (to) the Consultant" follow.

2.1.5 Wherever the words, "approved", "satisfactory", "directed" "permitted", "inspected", "instructed", "required", "submit", "ordered", or similar words or phrases are used in the Contract Documents, it shall be understood, unless the context provides otherwise, that "by (to) the Consultant" follow.

2.1.6 The contractor shall ensure that all construction personnel wear Personnel Protective Apparel, Hardhats and safety boots, safety glasses as required by OHSA, Ministry of Labour and applicable law.

2.2 ACCESS TO BUILDING

2.2.1 The Owner, Consultant and authorities having jurisdiction shall have access to the work at all times.

2.2.2 The Owner and other Contractors shall have the right to enter, use and occupy work site, in whole or in part, and place fittings and equipment before completion of the contract. The Contractor and his Subcontractors shall observe the right of other Contractors or persons authorized by the Owner or Consultant to use the work site.

2.2.3 **Keys and access to the building security code will be provided by the Owner to the Contractor**

2.2.4 The Contractor shall provide free and safe access to the building should the Owner require occupation prior to scheduled completion of the contract. The Contractor shall not be entitled to indemnity for any interference with his operations and any work still to be performed by the Contractor shall be performed at times other than when the building is occupied. Costs for Owner's staff to be present during work being carried out by the Contractor on weekends and after hours once the building is occupied, shall be paid by the Contractor.

2.2.5 Such entry or occupation by the Owner shall not be considered as acceptance of the work or in any way relieve the Contractor of his responsibility to complete the project on time.

2.3 PROVIDE MEANS, SUPPLY AND INSTALL

2.3.1 The words "by others" when used in the Specifications or on the Drawings shall not mean by someone other than the Contractor.

2.3.2 The only means by which something shown or specified shall be indicated as not being in the Contract is by the use of the initials "NIC" or the words "not in (the) Contract", "by Owner", or "by Owner's forces".

2.4 THE WORD "ALL"

2.4.1 Whether used or not, is intended to apply to all products and cases (events) mentioned in the Specifications, unless the context clearly and specifically provides otherwise. Example: it may be specified in one place that blocks shall be free from chips and in another place, it may stipulate that all blocks shall be clean. It shall be understood from this that all blocks shall be free from chips and clean.

PART 3 EXECUTION AND COMPLETION OF THE WORK

3.1 Commence no work on site until the contract is signed, the building permit is received and the Owner’s designated representative issues authorization in writing to the Contractor to proceed on site

3.2 All work of this contract shall be carried out within the time frame stipulated in the Instructions to Bidders.

3.3 Commence the work within ten (10) days of the signing of the Contract.

3.4 If necessary, due to special construction conditions, or if it becomes necessary in order to complete the Work within the contract time, to work overtime, the Contractor shall pay all necessary overtime costs and shall provide all necessary permits, co-ordination, etc. for same.

3.5 It shall be understood that the Contract Price includes sufficient funds for the provisions of temporary heating, temporary shelters and other necessary measures to enable all sub trades to proceed without delay regardless of weather or field conditions.

3.6 It shall be understood that the general contractor shall maintain a full-time superintendent on site for the entire duration of work of this contract.

3.7 **Deficiencies and defects in materials and / or workmanship must be corrected within 5 working days of notice from the Consultant or designated Board representative.**

3.8 The Contractor may obtain temporary water and power from the existing building at points approved by the Owner.

3.9 The Consultant will chair the preconstruction meeting.

3.10 The Consultant shall chair and minute bi-weekly construction meetings throughout the duration of the construction.

3.11 The Contractor shall erect and maintain an 8'-0" height portable chain link or omega fence enclosure around the exterior disposal bin l zone as construction progresses. The disposal bin shall be contained within the fenced enclosure

3.12 The building shall be secured by the contractor at all times during execution of work of this contract. All rough openings during demolition phase must be closed at night with 5/8" plywood or equivalent pending installation of new built element.

END OF SECTION 01010

1 APPLICATIONS FOR PAYMENT

1.1 Applications for monthly payments shall be submitted for review on CCDC Forms 15-77, 15-A-77, 15-B-77 (see Section 00860) showing the full schedule of values as per Section 01300, in rough draft form and approved by the Owner, Consultant and Contractor. Draft shall be submitted five (5) days before submission of the formal application in triplicate with one (1) copy each retained by the Owner and Consultant.

2 VALUATION OF CHANGES

2.1 The Contractor shall be responsible for providing all subcontractors with the required copies of C.C.N.'s and change orders.

END OF SECTION 01150

PART 1 DESCRIPTION

1.1 REQUIREMENTS INCLUDED

1.1.1 Schedule of Values, Construction Schedule, Certificates and Transcripts, Shop Drawings and Product Data, Samples, Record Drawings, and Operating Manuals and Reference Data.

1.2 WORK INCLUDED

1.2.1 Make submittals to the Consultant as called for throughout the Contract Documents, in conformance with this Section.

1.2.2 Make any changes in submittals which the Consultant may require, consistent with the Contract Documents and resubmit unless otherwise directed by the Consultant.

PART 2 GENERAL REQUIREMENTS

2.1 CONTRACTOR'S RESPONSIBILITY FOR SUBMITTALS

2.1.1 When making any submittal, the Contractor shall notify the Consultant, in writing, separate from the submittal of changes made therein from the Consultant's Drawings or Specifications. The Consultant's review of such submittals or of the revised submittals shall not relieve the Contractor from responsibility for changes made from the Consultant's Drawings or Specifications not covered by the Contractor's written notification to the Consultant.

2.1.2 The review of submittals by the Consultant is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the Consultant approves the detail design inherent in the submittals, responsibility for which shall remain with the Contractor submitting same. Such review shall not relieve the Contractor of his responsibility for errors or omissions in the submittals, or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the Site, for information that pertains solely to fabrication processor or to techniques of construction and installation, and for co-ordination of the work of all Subcontractors.

2.1.3 The Contractor shall assume responsibility for any conflicts occurring between the Subcontractors which result from lack of comparison and co-ordination of submittals of the work of the affected trades.

2.1.4 The review of submittals does not authorize changes in cost or time.

2.1.5 The Work shall conform with reviewed submittals subject to the above conditions.

2.1.6 All submittals shall be checked by the Contractor for conformity to Drawing and Specifications and his contractual requirements before submission to the Consultant for review. All submittals must bear the stamp of the Contractor and the signature of an authorized official in the Contractor's organization indicating in writing that such submittals have been checked and co-ordinated by the Contractor and his / her site superintendent .

2.2 SCHEDULING TIME OF SUBMITTALS

2.2.1 Make submittals with reasonable promptness and in an orderly sequence so as to cause no delay in the Work or in the work of other contractors. Be responsible for delays, make up time lost and pay added costs incurred because of not making submittals in due time to permit proper review by the Consultant and the Owner.

2.3 SAMPLES

2.3.1 Samples shall be constructed of the same materials as specified for the sampled element of the Work. Samples of assemblies shall be prepared so as to hold together as a unit.

2.4 TITLE

2.4.1 Each sheet or sample shall bear a title block or label giving the following information:

a) Name of the Work;
b) Descriptive name of subject matter;
c) Name, address and telephone number of fabricator;
d) Name, address and telephone number of person responsible for preparation of submittals;
e) Fabricator's project and submittal reference numbers;
f) Date prepared, and scale;
g) Date approved and initial of authorized person;
h) Signature and seal of sub-consultant where required by the Documents or authorities.

PART 3 SCHEDULE OF VALUES

3.1 Submit a schedule of values, broken down Section by Section and Subcontractor by Subcontractor on the monthly application for payments.

PART 4 CONSTRUCTION SCHEDULE

4.1 Submit a construction schedule to the Consultant within ten (10) days of award of Contract.

4.2 The construction schedule shall be in the form of a bar chart showing the commencement date, duration, completion date and any anticipated interruptions of each Section and each Subcontractor, major material and / or equipment delivery dates.

4.3 All Sections shall be made aware of this Schedule, agree that is feasible and acknowledge their commitment to it.

4.4 Show the date of commencement of work and the dates of Substantial Completion and Total Performance.

4.5 Post, maintain and enforce the schedule in accordance with Section 01040, Co-ordination.

PART 5 CERTIFICATES AND TRANSCRIPTS

5.1 **Immediately upon award of Contract, submit Workplace Safety & Insurance Board Certificate of Clearance, transcript of insurances executed bonds and copy of Ministry of Labour Notice of Project.**

PART 6 SHOP DRAWINGS AND PRODUCT DATA

6.1 Manufacturer's publications are acceptable for non-custom items of equipment. Where manufacturer's catalogues, excerpts from catalogues, pamphlets or other data sheets are submitted for items of equipment in lieu of, or together with prepared shop drawings, submit same number of copies of such publications and specifically indicate the items involved; submissions showing only general information are not acceptable.

6.2 Copies of shop drawings may be required by all or any of the following: Consultant, Sub-consultants, Authority, Owner, Contractor, Subcontractor, Fabricator and Operating Manuals and Reference Data.

6.3 Provide the following number of copies of shop drawings:

a) All Sections 1 high resolution digital file PDF format to the Owner and Consultant.

6.4 SHOP DRAWINGS AND PRODUCT DATA SHOW ALL

Necessary plans, elevations, sections and details to show all applicable information as required herein; dimensions; configurations, types and sizes required: Identify each unit type on drawing and on product; placing patterns, spacing, layout, locations, erection diagrams; integral reinforcement, framing, fabrication; anchoring, anchoring devices; control joints, joints and connections between elements; preparation and reinforcement for other products to be attached; welds: For structural welds use AWS symbols and clearly show net weld lengths, sizes and sequence; design loads for engineered products such as deck, mechanical and electrical equipment; descriptions of materials; metal, glass, board, panel, etc. thicknesses; finishes, shop and integral including thicknesses, colours, textures; glues, adhesives, joinery; installation details and instructions (for products to be installed by other Subcontractors); functions.

PART 7 SAMPLES

7.1 Submit 2 identical samples of each item required showing specified or proposed materials, construction, finish, colour, texture and pattern.

7.2 One of each pair of accepted samples will be returned to the contractor who shall hold it on Site until removal of it from the Site is permitted by the Consultant.

7.3 Any materials or assemblies, whether incorporated in the Work or not, which do not match approved samples shall be removed and replaced at no extra cost to the Owner.

PART 8 RECORD DRAWINGS

8.1 The Contractor shall obtain from the Consultant a complete and separate set of white prints to keep on the Site at all times.

8.2 These prints shall be marked up by responsible personnel of the Contractor and Subcontractors to record clearly, neatly, accurately and promptly all locations of buried mechanical and electrical work and deviations from the Contract Documents.

8.3 The accurate location, depth, size and type of each underground utility and service line shall be recorded before concealment to ensure accurately directed future access to these concealed services.

PART 9 OPERATING MANUALS AND REFERENCE DATA

9.1 The Contractor shall forward the following to the Consultant in conformance with the specified take-over procedures:

9.2 One printed copy loose leaf binder and electronically on a USB key:

a) List of all Subcontractors, major suppliers, and local equipment service representatives, their addresses and telephone numbers.

b) Date of substantial completion (commencement of warranty periods) and termination dates of warranties.

c) Operating manuals including lubricating, repair and other instructions to keep all mechanical and electrical / electronic equipment in good working order. Reviewed shop drawings of mechanical and electrical equipment.

d) Final hardware schedule, including lock manufacturer's descriptive and service literature.

e) Maintenance instructions for all types of floor finish and other special finishes.

f) Maintenance and service instructions and manufacturer's literature for all special architectural features - window hardware sources, parts lists and joint sealants used on this project.

g) All duly completed and signed extended warranties, etc.

h) **One copy** of each of the following in one of the binders: Statutory Declarations on CCA Forms 9A and 9C; Workplace Safety and Insurance Board Certificate; Electrical Safety Authority Certificate of Inspection; Fire Alarm Verification, Sprinkler Verification and Extended Warranties.

9.3 The cover of each binder shall bear:

9.3.1 **Name of Project**: **Accessibility Alterations to Russ Powell Centre**

9.3.2 **Name of Owner**: **C.L.O.C.A**

9.3.3 **Name of Consultant**: J.R. Freethy Architect

9.3.4 **Name of Contractor**:

PART 10 PROGRESS PHOTOGRAPHS

10.1 Subsequent to commencement of work and thereafter at weekly intervals, provide the Consultant with digital photographs, each recording the construction progress.

10.2 The following submissions shall be provided, subject to revision by the Architect to suit construction schedule.12 views each bi-weekly period.

END OF SECTION 01300

PART 1 DESCRIPTION

1.1 Requirements Included: General Instructions

1.2 Related Requirements: GC.25, "Contractor's responsibility and control of the Work@

PART 2 EXAMINATION/REVISIONS

2.1 **The Contractor affirms that before tendering the Contractor did examine the Site** and ascertain the extent and nature of all conditions affecting the performance of the Work including the location of all underground services which may have to be removed, relocated or protected.

2.2 **The Contractor affirms that before tendering the Contractor did examine the Specifications, Drawings and other Tender documents thoroughly**. It shall be assumed that the Contractor thoroughly understands these documents.

2.3 Drawings are intended to convey the scope of the Work and indicate general and approximate location, size and configuration of equipment, fixtures, ducts, piping, conduit, outlets. Obtain more accurate information about the location, arrangement, connectors and sizes from co-ordination of Shop drawings, field conditions, Specifications and the Drawings including architectural, structural, mechanical and electrical discussions. Where field conditions require reasonable changes in indicated location and arrangements/make such changes at **no extra cost** to the Owner.

2.4 Inform the Consultant of all problems encountered. Make no revisions without the Consultant's knowledge and approvals.

PART 3 SERVICES AND UTILITIES

3.1 Verify the location and/or availability of sewers, gas, water, telephone, electrical, etc. within the building site, adjoining properties, sidewalks, streets, etc. Contractor shall immediately notify the Consultant of any variance with the provisions of the Contract Documents.

3.2 Protect, relocate or maintain existing active services whenever they are encountered.

3.3 Cap off inactive services and remove the unwanted sections to the approval of the authorities, public utilities and/or the Consultant.

3.4 In the event of damage to active services, notify the Utilities, Authorities and the Consultant immediately. Make all required repairs under the direction of the appropriate utility. Pay all costs of such repairs including overtime as required to restore service(s).

PART 4 FINISHED DIMENSIONS AND ELEVATIONS

4.1 Finished work shall be plumb, flush, true to lines, levels and accurate in all respects. Provide all required dimensional co-ordination between the various sections of the Work including field engineering.

PART 5 DAILY RECORD

5.1 The Contractor shall maintain a daily written record on Site outlining the progress of the Work; Daily weather conditions; number of men engaged on the Work daily including Subcontractors; commencement and completion dates of all trades, sections of the Work; conditions such as strikes, manufacturing delays affecting the execution of the Contract.

5.2 This record shall be open to inspection by the Consultant upon request.

PART 6 CONSTRUCTION SCHEDULE

6.1 Post a copy of the Construction Schedule in the Site office. Update the schedule on a bi-weekly basis.

PART 7 MODULAR CO-ORDINATION

7.1 The Work incorporates both metric and imperial components. Conform to the modular unit and joint requirements for all components.

PART 8 MANUFACTURER'S INSTRUCTIONS

8.1 The specifications are not intended as a detailed description of installation methods but serve to indicate particular requirements in the completed work.

8.2 Where the specifications do not provide all information necessary for complete installation of an item, then the manufacturer's instructions for first quality workmanship shall be strictly complied with.

8.3 Notify the Consultant in writing of conflicts between the specifications and manufacturer's instructions, so that the Consultant may establish the course of action.

PART 9 FASTENINGS

9.1 Supply all fastenings, anchors and accessories and adhesive required for fabrication and erection of the Work. Exposed metal fastenings and accessories shall be of same texture, colour and finish as base metal on which they occur. Keep exposed fastenings to a minimum, evenly spread and laid out. Exposed means visible by the occupants at Completion of the Work, unless scheduled, indicated or specified otherwise.

9.2 Metal fastenings shall be of the same material as the metal component they are anchoring or of a metal which will not set up an electrolytic action which would cause damage to the fastening or metal component under moist conditions. In general, exterior anchors for windows, roofing sheet metal and anchors occurring on or in an exterior wall or slab shall be non-corrosive, hot dip galvanized steel or stainless steel.

9.3 Anchoring and fastening devices or adhesive shall be of appropriate type and shall be used in sufficient quantity in such a manner as to provide positive permanent anchorage of the unit to be anchored in position. Install anchors at spacing to provide for required load carrying capacity. Fastenings which cause spalling or cracking of material to which anchorage is being made are not permitted.

9.4 Attach and fasten fittings and fixtures in place in a safe, sturdy and secure manner so that they cannot work loose or fall or shift out of position during the occupancy of building as a result of vibration or other causes during the normal use of building.

9.5 Do not use powder-actuated fastening devices which are stressed in withdrawal on any part of the work without written Consultant's approval.

9.6 Properly size expansion shield anchor holes in concrete and drill cleanly to avoid over-sizing.

9.7 Wood plugs in masonry are not permitted. Fastenings shall be of permanent type.

PART 10 DISSIMILAR METALS

10.1 Insulate metals where necessary to prevent corrosion due to contact between dissimilar metals, and between metals and masonry, concrete or gypsum board. Use bituminous paint, butyl tape, building paper or other approved means. Use bituminous paint only on aluminium surfaces.

PART 11 THRESHOLDS

11.1 Set all thresholds in a bed of sealant.

PART 12 EMBEDDED CONDUIT, PIPE AND SLEEVES

12.1 Fill all unused sleeves and holes not otherwise filled. If unused sleeve is in a fire or sound barrier, it must be filled in such a way as to restore the integrity of the fire or sound barrier.

12.2 Sleeves, conduits and pipes which pass through suspended slabs, beams or walls, shall be in approved locations which do not impair the strength of the construction. Space them at not less than 3 diameter o.c. For conduit greater than one-third slab thickness, depress subgrade to maintain minimum 65 mm concrete above and below conduit, extend coverage 150 mm minimum each side of conduit. Where crossovers occur, one conduit or pipe shall be depressed to pass under the other and the subgrade depressed to increase the slab thickness locally.

12.3 Conduits or pipes embedded in concrete slabs on grade shall not be larger in outside diameter than one-third the thickness of the slab, and shall have minimum 50 mm concrete cover to the finished surface.

12.4 Where electrical or telephone boxes are back to back, serving each side, locate them at least 200 mm apart laterally.

PART 13 FLOOR SURFACES

13.1 Adequately protect trowelled concrete floors and finished flooring from damage. Take special measures when moving heavy loads or equipment on them. Keep floors free of materials likely to stain or impair bond of applied finishes.

PART 14 CONCEALED SERVICES

14.1 Install and arrange all ducts, piping, conduit, wiring and equipment and fixtures in such a way as to conserve headroom and space to provide minimum interference. Except as otherwise noted, run pipes, ducts, tubing and conduit, vertical, horizontal and square with building grid. Conceal pipes, ducts tubing and conduit above ceilings, behind furring or in walls, except in mechanical rooms, equipment rooms and unfinished spaces, unless indicated or specified otherwise.

PART 15 DEFLECTION

15.1 Provide allowances at the head of non-bearing partitions for deflection of the structure above. Clearance shall be based on span/360 (due to live load only) of old members supporting the floor or roof deck except as indicated otherwise on the drawings or specifications. Maintain the integrity of wall or partitions as fire or acoustic barrier.

PART 16 SUSPENDED CEILING SUPPORT

16.1 Provide adequate support for electrical fixtures in suspended ceilings. If separate support for such fixtures is not specified and fixtures are to be supported by suspended ceiling ensure that such support is adequate as required by the designated Electrical Inspection Department having jurisdiction and the Ontario Building Code.

If light fixtures are not supported independent of the ceiling system, then provide certification that adequate support is provided by the suspended ceiling and in particular conformance to the specified design.

PART 17 TRADEMARKS AND LABELS

17.1 Locate trademarks and labels on concealed or inconspicuous surfaces or remove by grinding if necessary or paint out where surfaces painted. If located conspicuously in exposed location.

17.2 All strippable coatings shall be removed prior to occupancy.

END OF SECTION 01600

PART 1 DELIVERY & SCHEDULING

1.1 **It is the responsibility of the Contractor to ensure that the supplier and/or distributor of the materials specified, which he / she intends to use, are on the Site when required.** All field dimensions of the existing field conditions and openings must be fully correlated by the Contractor and related subcontractors and / or suppliers prior to fabrication of the new construction components.

The Contractor shall obtain written confirmed delivery dates from the suppliers and / or distributors.

1.2 Notify the Owner and Consultant of any anticipated delays for the supply of product(s) and/or equipment.

PART 2 STORAGE, HANDLING AND PROTECTION

2.1 Store products in original and undamaged conditions with manufacturer's labels intact, protected from weather. The scheduling of the hollow metal doors and screens, wood doors, finish hardware, aluminum and window systems including glazing is critical to achieving the stipulated occupancy date. **The contractor will provide secure enclosed containers on site within the designated exterior site occupation limits.**

2.2 The contractor shall be responsible for the costs of any glazing replacements due to vandalism within the alteration areas.

2.3 Store doors, millwork, window assemblies and glazing on flat solid supports in secure area under similar temperature and humidity conditions to finished work.

2.4 Paints shall not be stored in the building.

2.5 Damaged products shall be replaced at no cost to Owner.

2.6 Handle products in accordance with WHMIS.

END OF SECTION 01610

PART 1 DESCRIPTION

1.1 Requirements Included:

Cleaning of the Work in progress.

PART 2 GENERAL CLEANING

2.1 The Contractor shall clean up the building and Site each day during the construction period. All debris and excess material shall be removed from the Site.

2.2 Should the Contractor fail to perform such clean up and/or removal, then the Consultant shall, on behalf of the Owner, notify the Contractor in writing that he/she is in default of his/her contractual obligations and instruct the Contractor to undertake said work within 24 hours of receiving the notice.

2.3 If the Contractor fails to comply with the direction, then the Owner may undertake such work and may deduct the cost thereof from the payment then or thereafter due the Contractor.

2.4 Remove oily rags and waste and other combustible debris from the active work zone at close of each day, or more often if required, and from site construction compound at least once a week.

2.5 Disposal Bins shall e 4.0 metres from the building face and kept within the storage compound.

3 STRIPPABLE COATINGS & LABELS

3.1 Remove from finished surfaces all labels and strippable protective coatings before they thermoset. All glazing shall be cleaned by the contractor prior to substantial performance.

4 FINISHED SURFACES

4.1 Clean finished surfaces upon the completion of the work of each Section for inspection by the Consultant.

END OF SECTION 01640

PART 1 DESCRIPTION

1.1 Requirements Included

1.1.1 Take-Over Procedure.

1.1.2 Finished Areas.

1.1.3 Final Cleaning.

1.1.4 Systems Demonstrations.

1.1.5 Documents.

1.1.6 Project Commissioning.

PART 2 TAKE-OVER PROCEDURE

2.1 General

2.1.1 The procedure for completing contracts and acceptance by the Owner is to be in accordance with the method described in the OAA/OGCA Document 100 and any additional requirements described below. The procedure described in the document consists of the following seven stages:

Stage 1 Contractor's Inspection for Substantial Completion
Stage 2 Contractor's Application for Certificate of Substantial Completion
Stage 3 Consultant's Certificate of Substantial Completion
Stage 4 Consultant's Certificate for Payment for Release of Holdback Monies
Stage 5 Final Inspection for Total Completion
Stage 6 Consultant's Final Payment Certificate and Release of Finishing Holdback Monies Payment Certificate
Stage 7 Warranty Period(s)

2.1.2 All stages will be reviewed at the pre-construction meeting to ensure that all parties understand their responsibilities.

2.5 Defect and Deficiency

2.5.1 A defect is an item of the Work required by the Contract which has been installed but requires repair and/or replacement at a specific time. An unauthorized product substitution shall be considered a defect and replacement of the element(s) shall be at the sole expense of the contractor.

2.5.2 A deficiency is an item of the Work required by the Contract which has not been installed or put into operating condition.

2.5.3 A warranty item is an item of work, installed under a contract which a manufacturer or installer agrees to maintain in, or restore to perfect condition for a specific period of time, after the Owner's acceptance of the Work as being substantially complete.

2.5.4 When, in the Consultant's opinion, the Work under the Contract is substantially complete, and prior to the final inspection by the Owner, a preliminary inspection shall be made at which time all defects and deficiencies shall be listed, taking care to distinguish between the two.

2.6 Deficiency List

2.6.1 Neither the Owner's representatives nor the Consultant will be responsible for the issue of

extensive lists of deficiencies. The Contractor shall understand that the prime responsibility for ensuring that all items shown on the Drawings and described in the Specification are complete is his / hers. Any inspections to approve Certificates of Substantial Completion shall be immediately cancelled if it becomes obvious that extensive deficiencies are outstanding.

2.6.2 During the inspection, decision must be made as to which defects must be rectified before the building can be accepted and which defects are to be treated as warranty items. Deficiencies shall be made good before the Contract is deemed complete.

PART 3 FINISHED AREAS

3.1 Close rooms and areas when Work of finished glazing and painting is at the final application stage and / or complete.

PART 4 FINAL CLEANING

4.1 Remove waste materials and debris from the Site at regularly scheduled times or dispose of as directed by the Consultant. Do not burn waste materials on site, unless approved by the Owner, Consultant and authorities having jurisdiction.

4.2 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

4.3 Leave the work room clean before the inspection process commences.

4.4 Immediately prior to occupancy by Owner, clean and dust and remove all stains and smudges from all finished surfaces, and all exposed fixtures and equipment.

4.5 Remove dust and soil form all surfaces by vacuuming, damp mopping, washing and scrubbing, as required. Vacuum behind grilles, louvers and screens. Do not wax terrazzo or resilient tile floor finishes.

4.6 Glazing surfaces shall be cleaned.

4.7 Clean all casework, specialties and accessories.

4.8 Remove all necessary labels, protective coating, markings and tags, thoroughly clean surfaces of adhesives.

4.9 Avoid contamination of surrounding surfaces with cleaning fluids.

4.10 Methods and materials for cleaning shall be in accordance with the manufacturer's recommendations for the finishes involved.

PART 5 SYSTEM DEMONSTRATION

5.1.1 Prior to final inspection, demonstrate operation of each system to Owner and Consultant.

5.1.2 Instruct personnel in operation, adjustment and maintenance of equipment and systems, using provided operation and maintenance data as the basis for instruction. The Contractor and responsible personnel from the Subcontractors whose work is being demonstrated shall be present at these demonstrations.

5.1.3 Balancing reports, ESA Certificate of Approval, Fire Alarm Verification Certificate, Sprinkler Verification Certificate shall be submitted prior to issuance of the Certificate of Substantial Completion.

5.1.4 Plumbing fixtures, heating and ventilation systems must be fully operational as a condition of Substantial Completion.

PART 6 DOCUMENTS

6.1.1 Within 42 days of commencement of Work, the Contractor shall make the first submittal required by OAA/OGCA Document 100, Take-Over Procedures.

6.1.2 Submit a final statement of account giving total adjusted Contract Sum, previous payments, and monies remaining due.

6.1.3 All required documents shall be submitted along with request for certification of Substantial Completion.

PART 7 PROJECT COMMISSIONING

7.1.1 Expedite and complete deficiencies and defects identified by the Consultant.

7.1.2 Review maintenance manual contents (operating, maintenance instructions, record "as-built" drawings, materials) for completeness.

7.1.3 Review cash allowances in relation to Contract Price, change orders, holdbacks and other Contract Price adjustments.

7.1.4 Submit required documentation such as statutory declarations, Workplace Safety and Insurance Board Certificate, warranties, certificates of approval or acceptance from the authorities.

7.1.5 Review inspection and testing reports to verify conformance to the intent of the documents and that changes, repairs or replacements have been completed.

7.1.6 Arrange and co-ordinate instruction of Owner's staff in maintenance and operation of window systems and roller blinds by suppliers and Subcontractors.

7.1.7 When partial occupancy of uncompleted project is required by the Owner, co-ordinate Owner's uses, requirements, access, with Contractor's requirements to complete project.

7.1.8 Provide on-going review, inspection and attendance to building call-back, maintenance and repair problems during the warranty periods.

7.1.9 Finished areas shall be sequentially turned over to the Owner for custodian=s to access the work zone for final cleaning and furniture setup.

END OF SECTION 01700

PART1 DESCRIPTION

1.1 Requirements Included:

Definitions; Submittals; Effective date of warranty period; extended or special warranties.

1.2 Related Requirements:

GC.24, Warranty; Special Conditions section 00800.

PART 2 DEFINITIONS

2.1 Defects:

The failure of equipment or systems to operate in the manner in which they were intended or designed to operate shall constitute a defect. The term "defect" shall not be construed as embracing such imperfections as would naturally follow misuse, failure to perform recommended maintenance, accident, or the wear and tear of normal use.

2.2 Any manufactured item or material which, when used as directed, must be capable of such use for the duration of the specified warranty period. Failure to comply with this requirement shall be considered as being a "defect".

PART 3 SUBMITTALS

3.1 Submit a fully executed and notarized copy of each extended warranty and each warranty with special provisions, worded as per the specifications, along with the application for Certificate of Substantial Completion.

PART 4 DATE OF COMMENCEMENT OF WARRANTY PERIOD

4.1 The **Warranty period** for each product or installation **shall commence** on the date of Substantial Performance as certified by the Consultant **or** the date of acceptance of a product or system, whichever comes later.

4.2 Execute transition of **Performance and Labour and Materials Payment Bonds** to **Warranty period** requirements.

END OF SECTION 01740

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements

1.2 Work Included

1.2.1 Work consists of performing selective demolition work on elements of existing building as designated on the drawings and as herein specified and as required by the work.

1.2.2 Remove resultant debris from the site.

1.2.4 Patch and make good all adjacent interior and exterior wall, floor, ceiling and roof construction, interior finishes damaged by the removal of existing construction.

1.2.5 Comply with the applicable requirements of CSA S350 - M1980 (R2003) “Code of Practice for Safety in Demolition of Structures” latest revision and authorities having jurisdiction.

1.2.6 Existing Male and Female Washrooms:

.1 Dismount and dispose of the existing washroom accessories, grab bars, hand dryers, Mirrors, vanities, water closets, metal toilet partitions, sinks, urinal, wall mounted coat hooks, shelving, soap dispensers, sanitary napkin disposal receptacles.

.2. Cut openings in existing gypsum board and concrete block partitions as required to install new electrical devices, plumbing connections.

.3 Arrange for division 15 to temporarily dismount the existing light fixtures, emergency lights,

.4 Remove the two existing hollow metal doors and frames, related hardware, anchors at the locations indicated.

.6 Sawcut and remove the existing concrete block partition wall sections as indicated on the drawings to provide the new barrier free turning radii at entrances to the washrooms.

.7 Sawcut and remove existing 4” concrete slab on grade as required to install the scheduled new sanitary drains.

.8 Remove all existing 4” height ceramic tile cove base and underlying adhesive.

.9 Remove the existing double angle steel lintels and 3 courses of masonry above the existing washroom entry door frames.

.10 Remove the existing ceramic tile floor finishes in the washrooms and grind the floor slab and prepare the slab for the schedule new finishes.

.13 Sand the existing masonry wall surfaces scheduled for new porcelain tile finish to 2500 A.F.F.

PART 2 RESTORATION

2.1 Upon completion of work, remove any remaining debris, trim surfaces and leave work site clean.

2.2 Dispose of demolished materials in accordance with authorities having jurisdiction. All glass shards must be immediately removed from areas accessible by students.

2.3 All demolition debris must be in bins within the construction compound not left on the sod / asphalt / play / walkway surfaces.

PART 3 ALL OF THE ABOVE AS INDICATED ON THE DRAWINGS AND AS HEREIN SPECIFIED.

3.1 PROVIDE ALL REQUIRED CUTTING AND PATCHING AS REQUIRED TO FIT NEW CONSTRUCTION TO EXISTING.

3.2 Remove all resultant debris from the job site and dispose of in accordance with the applicable legislation.

END OF SECTION 02010

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements.

1.2 Work Included

1.2.1 Excavation, backfilling, compaction temporary sedimentation and erosion control measures.

1.2.2 Furnish all labour, materials and equipment to complete all site preparation, excavation, trenching, filling, compaction related to the concrete slabs on grade and restoration of subgrade within selective building demolition areas.

1.2.3 If any additional materials are required they shall be supplied by the Contractor. Any surplus material shall be removed from the site and disposed of.

1.2.4 Drain the excavations as required, to maintain a dry condition.

1.2.5 All shoring, bracing, guard rails etc. as required to meet the requirements of the Construction Safety Act and the Trench Excavator's Protection Act.

1.2.6 This Contractor shall pay fees, secure all permits and make all necessary arrangements with Utility Companies and local authorities having jurisdiction or owning services on or adjacent to the site.

1.2.7 The Contractor shall be responsible for keeping adjacent public roadways clean daily.

1.2.8 All surplus material shall be removed from site to a location arranged for and at the expense of the Contractor.

1.2.9 Provide sedimentation and erosion control measures.

1.2.10 Provide excavation and finish grading as required to fit new construction to existing.

1.2.11 All of the above as indicated on the drawings and as specified herein and as required by the work.

1.3 Related Work

1.3.1 Granular base course under asphaltic concrete paving areas provided by Section 02513.

1.3.2 Water, storm and sanitary services and mechanical work including excavation and backfill for same within the building area provided by Division 15 Mechanical shall be in conformance with this Section.

1.3.3 Electrical work and excavation and backfill for same provided by division 16 Electrical shall be in conformance with this Section.

1.4 Existing Services and Utilities

1.4.1 Prior to commencing any excavation work, the Contractor shall establish as near as possible

the location and state of use of all buried utilities or services. The location shall be clearly marked to prevent accidental disturbances during the work.

1.4.2 Protect all above ground service facilities from damage during the work of this Section.

1.5 Examination of Site

1.5.1 Examine the site and note all characteristics and features affecting the work. No allowance will be made by the Owner for difficulties encountered or expenses incurred on account of any site condition, or any item existing thereon, visible or known to exist when tender is submitted.

1.5.2 Establish the extent and nature of materials necessary to be removed or fill to reach or provide depths, levels, grades and required soil-bearing value, all in conformity with the drawings and specifications.

1.5.3 Information shown on drawings regarding levels is provided in good faith for the Contractor's guidance but shall in no way relieve the Contractor of responsibility for confirming existing conditions.

PART 2 PRODUCTS

2.1 Backfill

2.1.1 All fill inside the building and under paving, concrete sidewalks, curbs, shall be clean, granular, inorganic material.

2.2 Materials

2.2.1 Type 1 Fill: Granular "A" per Ontario Provincial Standard Specification (OPSS) 1010, clean hard, durable crushed gravel or stone, free from shale, clay, friable materials, organic matter and other deleterious substances and graded within the following limits when tested and giving a smooth curve without sharp breaks when plotted on a semi-log grading chart:

MTO Sieve Designation	% Passing
37.5mm	100
16.0mm	62 - 100
9.5mm	48 - 73
4.75mm	33 - 55
1.18mm	15 - 45
0.300mm	5 - 22
0.075	0 - 8

2.2.2 Type 2 fill: Granular "B" clean, hard, durable sand, gravel or crushed stone, free from shale, clay, friable materials, organic matter and other deleterious substances and graded within the following limits when tested and giving a smooth curve without sharp breaks when plotted in a sem-log grading chart:

MTO Sieve Designation	% Passing
150mm	100
26.5mm	50 - 100
4.75mm	20 - 55
1.18mm	10 - 40
0.300mm	5 - 22
0.075mm	0 - 8

2.2.3 Type 3 fill: selected material from excavation or other sources, approved by Consultant for use intended, unfrozen and free from rocks larger than 100mm, cinders, ashes, sods, refuse or other deleterious materials.

2.2.4 Type 4 fill: Clean sharp sand free from stone larger than 6mm.

2.3 Topsoil

2.3.1 In addition to any reusable topsoil available from the site, any additional topsoil material to be supplied shall be a sandy loam, screened and free from stones and roots.

2.4 Fill Under Slabs on Grade

2.4.1 Slabs on grade shall be placed on a bed of well compacted granular "A" gravel at least 8" (200mm) thick well rolled to an even surface. Base shall be compacted to provide a hard dense base for the concrete slabs. Compaction shall be a 100% dry density as determined by the Standard Proctor Test.

2.5 Trench Bedding and Backfill

2.5.1 Trench bedding material shall be Granular "A" compacted to 100% Standard Proctor Density.

2.5.2 Trench backfill material shall be approved native backfill compacted to 95% Standard Proctor Density (SPD) beneath landscaped areas and Granular "B" compacted to 95% SPD beneath roadway parking areas.

PART 3 EXECUTION

3.1 Site Preparation Within Existing Building Alteration Areas

3.1.1 The Contractor shall grade the area of the building and compact approved structural fill as required.

3.1.2 The Contractor shall fill and compact the resultant excavation in the selective demolition areas with type 2 fill compacted to 95 proctor.

3.1.3 A representative from a soil testing firm shall be on the site during all filling and compaction activities.

3.1.4 Compact native subgrade before backfilling commences.

3.1.5 Subgrade to be verified by the Soils Inspection Engineer.

3.2 Excavation

3.2.1 Remove all obstructions of whatever nature encountered in the course of excavation.

3.2.2 Excess materials not required for other purposes shall be hauled away. Stockpiling on the site will be permitted only if the stockpiles do not interfere with construction. All materials and equipment required to fulfil this contract shall be supplied by this Contractor.

3.2.3 The bottom of all excavations where footings occur shall be levelled and free from all loose or organic materials. All excavations shall be made to clean lines so as to minimize quantity of fill materials required.

3.2.4 Excavation to greater than required depth shall be corrected by the Contractor at no expense to the Owner in the manner as directed by the Consultant. When bearing surfaces are unintentionally over excavated, they shall be protected as necessary and left unaltered until after inspection by the Architect. The bearing surface elevation shall be brought back to that required by the drawings, using concrete of a strength specified by the Consultant or by other means as directed by him.

3.2.5 Notify Consultant to inspect excavations when these are completed to the required depth.

3.2.6 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.

3.2.7 Obtain Consultant's approval of completed excavation.

3.2.8 Remove unsuitable material from trench bottom to extent and depth as directed by Consultant.

3.2.9 Where required due to unauthorized over-excavation, fill under bearing surfaces and footings with concrete specified for footings. Fill under other areas with Type 2 fill compacted to minimum of 95% Standard Proctor Maximum Dry Density.

3.2.10 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil.

3.2.11 Excavation for all services, water lines and plumbing lines and plumbing is to extend to Competent Native Soil and then backfilled to 95% maximum dry density as determined by the Standard Proctor Test, as to the level of installation of the service.

3.3 Exterior Filling and Backfilling

3.3.1 Exterior new concrete and paved areas to be graded and filled to a level approximately 150mm (6"), below the underside of the finish materials and to receive the appropriate base materials to match details.

3.3.2 Excavate to receive new asphaltic paving and granular base course as specified in Section 02513

3.4 Grading

3.4.1 All exterior grades shall be executed in accordance with the drawings to each scheduled elevation with allowance for finish as indicated, i.e. topsoil, seeding, sodding, sidewalk or paving. In forming existing grades, remove any large stones, etc., which could interfere with the final dressing of the topsoil.

3.4.2 Surplus excavated material shall be removed from site to a location arranged for and at the expense of the Contractor.

3.5 Additional Excavation

3.5.1 Should the footing invert bearings at the levels indicated be found by the Consultant to be insufficient, the Consultant may order the excavation carried to the proper bearings. Such work shall be classed as additional work and the cost thereof shall be determined on a change directive basis.

3.6 Water and Excavation

3.6.1 Care must be taken to keep foundations dry during construction by use of trenches, sumps or pumps. Entire excavation shall be kept clear of water until footings have taken a permanent set.

3.6.2 Protect open excavations against flooding and damage due to surface run-off.

3.6.3 Dispose of water in a manner not detrimental to public and private property, or any portion of work completed or under construction.

3.6.4 Provide settling basins, or other treatment facilities to remove suspended solids or other materials before discharging to storm sewers, water courses or drainage areas.

3.7 Fill Types and Compaction

3.7.1 Use fill of types as indicated or specified below. Unless otherwise specified, compact to following densities.

3.7.2 Type 1: 95% Standard Proctor Maximum Dry Density to ASTM D698-78.

3.7.3 Type 2: 95% Standard Proctor Maximum Dry Density to ASTM D698-78.

3.7.4 Within building area: use Type 2 to underside of base course for floor slabs. Compact to 100% Standard Proctor Maximum Dry Density to ASTM D698-78. Lay in layers not to exceed 200mm.

3.7.5 Under concrete slabs: provide 200mm compacted thickness base course of Type 1 fill to underside of slab to suit finish floor elevations shown on drawings. Compact base course to 100% Standard Proctor Maximum Dry Density to ASTM D698-78.

3.7.6 Retaining walls: use Type 2 fill to subgrade level on high side for minimum 500mm from wall and compact to 95% Standard Proctor Maximum Dry Density to ASTM D698-78. Use Type 2 or 3 fill compacted to 95% Standard Proctor Maximum Dry Density to ASTM D698-78 for remainder of fill.

3.7.7 If, during progress to work, tests indicate fills do not meet specific requirements, remove defective fills, replace and retest at no extra cost.

3.8 Backfilling

3.8.1 Do not proceed with backfilling operations until Consultant has inspected and approved installation.

3.8.2 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.

3.8.3 Do not use backfill material which is frozen or contains ice, snow or debris.

3.8.4 Place backfill material in uniform layers not exceeding 300mm compacted thickness to levels required for surface treatment as indicated. Compact each layer before placing succeeding layer.

3.9 Backfilling Around Installations

3.9.1 Place bedding and surround material as specified elsewhere.

3.9.2 Do not backfill around or over cast-in-place concrete within 72 hours after placing of concrete.

3.9.3 Place layers simultaneously on both sides of installed work to equalize loading. Difference not to exceed 0.600m.

3.9.4 Where temporary unbalanced earth pressures are liable to develop on walls or other structure, permit concrete to cure for minimum 14 days or until it has sufficient strength to withstand earth and compaction pressure and approval obtained from Consultant.

3.10 Underslab Granular Fill

3.10.1 Excavate and remove soft spots and foreign material in the subgrade.

3.10.2 Properly grade and compact granular base after installation of all underground services.

3.10.3 Level fill to required elevations within a tolerance of 13mm (1/2") under a 3050mm (10'-0") straight edge.

3.10.4 Compact porous fill thoroughly with vibratory compactors to 100% Standard Proctor Density.

3.11 Filter Fabric (Erosion Control Measures)

3.11.1 Install in accordance with requirements of M.T.R.C.A. Provide 2-foot overlap between adjoining sheets. Maintain throughout duration of construction.

3.12 Guard Rails and Hoardings

3.12.1 Guard rails, warning and safety lights shall be furnished and erected and maintained as required until the foundations and work under this Division is complete. A temporary 2.44 metre height chain link fence is to be constructed around the active construction zones and is to be maintained for the duration of the construction period.

3.13 Shoring

3.13.1 All shoring, bracing, sheet piling and cribbing shall be the responsibility of the Contractor and meet all requirements of the Construction Safety Act and the Trench Excavator's Protection Act.

3.14 Temporary Construction Access

3.14.1 The Contractor is responsible for constructing and maintaining temporary construction access routes as required to complete the work.

3.15 Clean Up

3.15.1 The Contractor shall be responsible for good housekeeping during work of this Section.

3.15.2 The Contractor shall be responsible for keeping the surrounding public roadways free of excessive solid deposits from material hauling trucks. Trucks shall be loaded carefully to prevent spillage or wind carrying. Any temporary roads on the site shall be kept clean and accessible during the construction period.

3.15.3 Wherever these safeguards are insufficient to prevent street soilage, immediate arrangements will be made to clean road surfaces to the satisfaction of the requirements of the local Municipal Authority.

END OF SECTION 02210

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements.

1.2 SCOPE OF WORK

1.2.1 The work shall include the removal of broken and chipped concrete and application of bonded levelling compound on areas to be made good. Fill in all disturbed areas with aggregate and cement, as required, and as hereinafter specified.

1.2.2 Provide restoration of concrete slab on grade at all slab removal locations, pipe trenches, wall removal locations as required to fit new construction to existing and as set forth on the Structural drawings.

1.2.3 Concrete strength shall be minimum 25 mpa.

1.2.4 Concrete shall not be placed until all backfill and compaction operations have been inspected by the consultant and verified by the geotechnical inspection company.

1.2.5 Contractor shall retain an independent inspection company to take cylinders on site for each pour. Provide test results for 7 and 28 day periods.

1.2.6 Provide sawcut control joints as set forth on the structural drawings. Minimum 7.5 m on centre.

1.2.7 New concrete shall not be loaded until a minimum of 7 days curing has occurred.

1.2.8 Provide protective floor coverings on existing corridor and ramp floors during transport of concrete to the work zones.

1.2.9 Provide cast in place concrete at scheduled cutting and patching locations in accordance with the provisions of the structural drawings. Interior slab thickness shall be minimum 100mm thick.

1.2.10 Provide new cast concrete slab modifications as set forth on the structural drawings.

1.2.11 Refer to structural drawings for additional concrete requirements.

1.3 Reference Standards

1.3.1 Do concrete work in accordance with CAN3-A23.1-M94 except where specified otherwise.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Exterior concrete, 30 mpa, 5% air entrainment reinforced with fibremesh.

2.1.2 Interior concrete: 25 mpa reinforced as per drawings.

2.1.3 Use compatible additives, admixtures and hardeners.

2.1.4 Levelling compounds for interior patching:

Epoxy Adhesive - Monobond by MacNaughton Brooks Ltd.,
SikaTop 121, Polymer modified repair mortar
SikaTop 223, Cementitious patching mortar
SikaTop 222
SikaTop122 Plus

PART 3 EXECUTION

3.1 Floor Finish

3.1.1 Finish interior concrete in accordance with CAN3-A23.1- M94 Class A

3.1.2 Concrete floors scheduled to receive resilient tile floor finishes shall be steel trowelled to a smooth finish. Defects shall be ground off to ensure they will not show through scheduled floor finish.

3.1.3 At areas scheduled for terrazzo leave concrete slabs rough but level at elevation to receive finish.

3.1.4 **Apply levelling compounds as required to repair locations where flooring has been removed and as required to provide smooth juncture between new and existing construction.**

3.1.5 Apply floor levelling compound to manufacturer's instructions, maximum thickness 6mm. Over 6mm use SikaTop 122. Cure to manufacturer's recommendations.

3.1.6 Do not sprinkle dry cement or dry cement and sand mixture over concrete surfaces.

END OF SECTION 03345

PART 1 CONDITIONS

1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1..2 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements

1.2 References

1.2.1 CAN / CSA A179 (R2009) Mortar and Grout for Unit Masonry.

1.2.2 CAN3-A371-04 (R2009) Masonry Construction for Buildings.

1.3 Product Delivery, Storage and Handling

1.3.1 Deliver materials to job site in dry condition.

1.3.2 Keep materials dry until use except where wetting of bricks is specified.

1.3.3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.4 Protection

1.4.1 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

1.4.2 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Masonry materials are specified in related Sections 04100, 04150, 04220.

PART 3 EXECUTION

3.1 Workmanship

3.1.1 Do masonry work in accordance with CAN3-A371-04 (R2009) except where specified otherwise.

3.1.2 Build masonry plumb, level, and true to line, with vertical joints in alignment.

3.1.3 Layout coursing and bond to achieve correct coursing heights, continuity of bond above and below openings with minimum of cutting.

3.2 Tolerances

3.2.1 Tolerances in notes to Clause 5.3 of CAN3-A371-04(R2009) apply.

3.3 Exposed Masonry

3.3.1 Remove chipped, cracked, and otherwise damaged units in exposed masonry and replace with undamaged units.

3.4 Jointing

3.4.1 Allow joints to set just enough to remove excess water then tool with round jointer to provide smooth, compressed, uniformly concave joints. Joints shall be 10mm thick.

3.4.2 Strike flush all joints concealed in walls and joints in walls to receive plaster, tile, insulation, or other applied material except paint or similar thin finish coating.

3.5 Cutting

3.5.1 Cut out neatly for electrical switches, outlet boxes, and other recessed or built-in objects.

3.5.2 Make cuts straight, clean, and free from uneven edges.

3.6 Building-In

3.6.1 Build in all items required to be built into masonry.

3.6.2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.

3.6.3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

3.7 Support of Loads

3.7.1 Use 20 MPa concrete to Section 03300 - Cast-in-Place Concrete, where concrete fill is used in lieu of solid units.

3.7.2 Use grout to CAN / CSA A179-04 (R2009) where grout is used in lieu of solid units.

3.7.3 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units.

3.8 Provision for Movement

3.8.1 Leave 3 mm space below shelf angles.

3.8.2 Leave 12 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges. Pack void between u/s structural element and masonry with A/D Fire barrier mineral wool firestopping at rated walls and roxul mineral fibre batts at non-rated walls.

3.9 Loose Steel Lintels

3.9.1 Install loose steel lintels. Centre over opening width. Provide 8" bearing at each end.

3.10 Control Joints

3.10.1 Provide continuous control joints on drawings at junctures between new partitions and existing construction, and max 20' 0" centres. **Do not fill control joints with mortar.**

3.11 Cutting and Patching of Existing Work

3.11.1 Make good existing work. Use materials to match existing. Existing masonry in good condition may be cleaned and reused to patch new openings in existing construction. Infill of existing openings shall be toothed in to match existing coursing.

3.11.2 All masonry materials and equipment must be kept within the designated storage compound and active work zone fenced areas. Forklifts shall not be operated outside of these zones when students are outside the building.

3.11.4 Existing corridor masonry wall is 8” block.

3.12 Sawcutting of Unit Masonry

3.12.1 Sawcutting operations shall be done within the exterior construction compound to mitigate the spread of dust throughout the existing facility. All saw-cutting operations shall be a wet saw process. Dry cutting is prohibited.

3.13.2 Personnel cutting masonry shall wear protective personal safety equipment as per O.H.S.A. and applicable law.

3.14 Forklift Operations

3.14.1 Forklift operation shall not exceed 2 km per hour on site

END OF SECTION 04050

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Related Work

1.2.1 Masonry procedures: Section 04050.

1.3 References

1.3.1 CAN / CSA A179-04 (R2009) Mortar and Grout for Unit Masonry.

1.4 Samples

1.4.1 Submit manuf. colour chart in accordance with Section 01300 - Submittals for selection of tinted mortar by Consultant.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Mortar and grout: CSA A179-04 (R2009).

2.1.2 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.

2.1.3 Colour: ground coloured natural aggregates or metallic oxide pigments.

2.1.4 Dirt resistant additives: aluminum tristearate, calcium stearate or ammonium stearate.

2.2 Material Source

2.2.1 Use same brands of materials and source of aggregate for entire project.

Mortar for exterior masonry above grade:

.1 Load-bearing: Type S.
.2 Non-Load-bearing: Type N.

2.2.2 **Mortar for foundation walls** masonry at or below grade: Type S.

2.2.3 **Mortar for interior masonry**:

.1 Load-bearing: Type S.
.2 Non-Load-bearing: Type N.

2.3 Mortar

2.3.1 Propriety cement mortar mixes to produce applicable mortar type. Colour to match existing

at exterior wythes. Interior locations, natural grey.

2.4 Acceptable Manuf.

2.4.1 Domtar; St. Mary's Cement; St. Lawrence Cement; Canada Cement; Lake Ontario Portland Cement.

2.5 Grout

2.5.1 Grout: to CAN / CSA A179-04 (R2009) Table 3.

PART 3 EXECUTION

3.1 Mixing

3.1.1 Do masonry mortar and grout work in accordance with CSA A179 except where specified otherwise.

3.1.2 Mix grout to semi-fluid consistency.

3.1.3 Incorporate colour admixture into mixes in accordance with manufacturer's instructions.

3.1.4 Pre-hydrate pointing mortar by mixing ingredients dry then mix again adding just enough water to produce damp unworkable mix that will retain its form when pressed into ball. Allow to stand for not less than 1 hour not more than 2 hours then re-mix with sufficient water to produce mortar of proper consistency for pointing.

3.1.5 **Use of calcium chloride accelerators in the mortar mix is prohibited.**

END OF SECTION 04100

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Related Work

1.2.1 Cast-in-place concrete: Section 03300

1.2.2 Masonry procedures: Section 04050

1.2.3 Mortar and grout for masonry: Section 04100

1.2.4 Miscellaneous Metal: Section 05500

1.3 References

1.3.1 CAN3-A371-05 (R2009) Masonry Construction for Buildings.

PART 2 PRODUCTS

2.1 Masonry Wall Ties

2.1.1 Horizontal Masonry Tie Type 1

Dur-O-Wall DW200 Ladur Series 4.76 mm dia. longitudinal rods/3.66mm cross rods class 3 for above grade masonry. Below grade installations shall be hot dipped galvanized to 457 g/m^2 after fabrication. Provide prefabricated corners and tees at all intersecting wall conditions.

2.1.2 Horizontal Masonry Tie Type 2

Fero Shear Truss "Block Shear Connector" assembly consisting of 16ga. steel connector plate hot dipped galvanized to CSA CAN 3-A370 and ASTM requirement of 401 g/m^3, V -tie and insulation support. V-tie shall be 4.76 dia. wire conforming to CSA Standard G30.3, hot dipped galvanized to 458g / m^2 CSA CAN 3-A370. Legs of V-tie shall be sized to mortared in place at the centre of the exterior architectural masonry wythe (60mm length). The insulation support clip shall be polyethylene as supplied with the Fero block shear system.

2.1.3 Supplemental Masonry Tie Type 3 (Interior Locations Only)

Dur-o-wall DA2200 joint stabilization anchor, 8ga.

2.1.4 Supplemental Wall Tie at Column Locations: (Tie Type 4)

Dur-o-wall type F/P column flange ties. 9 gauge hot dipped galvanized to 457 g/m^2. Spacing 400mm vertically.

2.1.5 Supplemental Wall Tie at Structural Channel Locations: (Tie Type 5)

Dur-o-wall MSSA anchors mechanically secured with self-tapping galvanized Dur-o-Wall SX fasteners. Hot dipped to 457 g/m^2. Drill pilot hole in channel for SX fasteners.

2.2 Control Joint Bond Break

No. 15 asphalt felt.

2.3 Internal Wall Flashing

Blueskin TWF thru wall flashing membrane by Monsey Bakor / Sopraseal 1100 by Soprema or Perma Barrier System 4000/ or equal by W.R. Meadows.

2.4 Dampproof Course

"Blueskin A.G. Width 50mm less than masonry thickness or equal by Soprema / Grace/ W.R. Meadows.

2.5 Masonry Veneer Weep Vents

90mm x 90mm Blok-Lok aluminum weephole ventilators or equal by Dur-o-wall.

2.6 Internal Rainscreen Wall Cavity Vent Backup

1" thickness AMortar Net@ Product #MN10-1 as distributed by J.V. Building Supply, Woodbridge, Ontario. Telephone # 905-851-3744, (1500mm lengths).

At base on wall cavity (airspace), provide a continuous installation of the specified mortar net system for the full length of the new exterior wall construction.

At base of all exterior steel lintels provide the mortar net system for the full length of the lintel.

2.7 Wall Flashing Adhesive

Air Bloc 21FR by Bakor or as recommended by Membrane Manf.

2.8 Vapour Barrier Membrane

Blueskin A.G. / Sopraseal 1100 / Perma Barrier System 4000 or equal by W.R. Meadows

PART 3 EXECUTION

3.1 Dampproof Course

3.1.1 Install dampproof course at top of all concrete and masonry foundation walls. Dampproof course shall be 50mm narrower than masonry wythe above and centred on the masonry wythe.

3.2 Flexible Sheet Flashings

3.2.1 Install flexible sheet flashings in masonry in accordance with CAN / CSA A371-04 (R2009)as follows:

.1 Install flashings under exterior masonry veneer bearing on foundation walls / slabs.

Base flashing shall project 12mm beyond exterior face of foundation wall. Carry membrane under outer wythe, then up exterior face of air vapour barrier membrane 200mm and embed flashing 25mm in joint of inner structural wythe. Lap end joints minimum 400mm and seal with manuf. recommended adhesive to ensure watertight seal. Caulk exposed joint with Butyl sealant prior to erecting veneer.

.2 Provide flexible through wall flashings at all exterior masonry bearing on lintels, shelf angles, steel plates, steel beam locations. Flashing shall project 12mm beyond exterior face steel supports, then carry flashing under outer wythe, then up backing to exterior face of insulation minimum 200mm. Continue flashing upwards maintaining positive slope to the exterior through insulation (bevelled) to next inner block course (400mm above lintel) over vapour barrier membrane. Embed flashing 25mm in joint of inner wythe.

3.3 Masonry Wall Cavity Pressure Equalization System (Mortar Guard)

3.3.1 At base of all lintel locations provide the mortar net system as described above for full width of all lintel, shelf angles, steel plates and beam locations.

3.4 Masonry Wall Ties / Reinforcement Schedule of Systems

3.4.1 Interior Concrete Unit Masonry Loadbearing and Non Load-Bearing Walls

Provide type 1 masonry ties at 400mm o/c vertically (ie. every second course) for full height of wall section. Provide prefabricated corners and tees at each intersecting new wall location. Lap splices minimum 305mm. Supplemental ties type 3 are mandatory at partitions at intersections with existing walls (corrugated brick ties are not acceptable). Vertical spacing shall not exceed 400mm o/c. Provide additional reinforcement as set forth on the structural drawings.

Supplemental ties type 4 shall only be used at col. intersections where insufficient masonry depth restricts placement of flat bar anchor scheduled by division 5.

3.4.2 Above Grade Exterior Wall Construction

3.4.3 Install first row of masonry type 2 Fero block shear connectors oriented vertically at a spacing commencing 8" (200mm) above top of existing masonry foundation wall and horizontal spacing of 600mm (24").

3.4.4 Install additional ties above first row a maximum horizontal spacing of 600mm and maximum vertical spacing of 400mm.

3.4.5 At a distance 200mm (8") from top of new and repair area exterior masonry wythe locations install an additional row of ties spaced 600mm c/c maximum horizontally.

3.4.6 Provide additional row of ties at each control joint location as detailed on the drawings.

3.4.7 Install type 1 masonry ties at 400mm o/c vertically at inner structural wythe as coursing progresses.

3.4.8 Upon completion of block shear connector installation notify consultant for structural review prior to application of air vapour barrier by section 07190.

3.4.9 Co-ordinate installation of air / vapour barrier system with section 07190. This section shall set the ties once division 7 has completed their work and the consultant has approved the installation.

3.4.10 Install the ties at all masonry tie locations. Ensure ties are set properly to provide full effective restraint of the composite action exterior masonry wythe locations.

3.4.11 Type 4 or type 5 anchors shall be used at intersecting steel col. or concrete conditions to secure masonry veneer and maintain anchor spacing referenced above for type 2 anchors.

3.4.12 Provide type 3 anchors at 400mm o/c at 140 block wall nib locations and juncture of new partitions with existing masonry construction.

3.5 Masonry Vents

3.5.1 Provide masonry vents as the wythes progress at the scheduled locations in the exterior rainscreen wall veneer as scheduled herein:

.1 Base of Wall Cavity
800mm o/c. Locate over through wall flashing

.2 Exterior Lintel Locations / Architectural Face Brick Masonry Veneer
600mm o/c. Locate in vertical joint immediately over through wall flashings.

.3 Top of Architectural Face Brick Masonry Veneer Wall System
Provide vents 800mm o/c at the third course from the top veneer course.

END OF SECTION 04150

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Work Included

1.2.1 Provide all required cutting and patching masonry repairs at new door , beam , lintel, opening locations and interior masonry wall alteration areas.

1.2.3 Provide all required cutting and special shapes required to fit masonry to scheduled structural steel, loose lintels, ductwork, pipe sleeves, bearing plates.

1.2.4 Provide all required cutting and patching at new duct openings, new conduit risers, sleeves, new bearing plates and new plumbing risers. Coordinate with division 15 and 16. Infill all abandoned duct openings in existing masonry walls .Refer to mech drawings. Match width of existing masonry wall construction.

1.2.6 Provide all required cutting and patching at new hollow metal frames scheduled to be installed in existing and new unit masonry construction.

1.2.8 All of the above at the locations as described on the drawings and as specified herein and as required to fit new construction to existing building.

1.2.9 All masonry materials must be stored within the designated site occupation limits.

1.3 Related Work

1.3.1	Masonry procedures	Section 04050
1.3.2	Mortar and grout for masonry	Section 04100
1.3.3	Masonry accessories	Section 04150

1.4 References

1.4.1 CAN / CSA3-A165 Series 04 (R2009) Standards on Concrete Masonry Units.
CAN/CSA A82.1 - M87 (R1992) Burned Clay Brick

PART 2 PRODUCTS

2.1 Materials

2.1.1 Lightweight Concrete Masonry Units

Conforming to CAN / CSA-A165.1-94 Series 04 (R2009)

.1 Classification Type L_2 20S
.2 Size: Metric Modular

.3 Special Shapes: provide bull - nosed units for all exposed corners. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.

2.1.2 Special Lightweight Fire Resistant Concrete Masonry Units

.1 Size: metric modular.
.2 Special shapes: provide bullnose units for exposed corners. Provide purpose-made shapes for lintels and bond beams.
.3 Classification: H/15/C/M/ except as modified by fire resistance requirements specified below. Type L_2 20S
.4 Fire resistance characteristics: aggregate used in units and equivalent thickness of units to comply with the requirements of the National Building Code of Canada 2010 for fire-resistance ratings indicated.

PART 3 EXECUTION

3.1 Laying Concrete Masonry Units

3.1.1 Bond: running except as noted otherwise.

3.2 Coursing Height

3.2.1 Concrete Masonry Units: 200 mm for one block and one mortar joint except 100mm for ashlar courses. At Corridor wall match existing imperial modules.

3.3 Concrete Masonry Units

3.3.1 200mm for one block and one mortar joint except 100mm for ashlar accent course. Refer to drawings for location of masonry types.

3.3.2 Jointing: concave where exposed or where paint or other finish coating is specified. Strike outer surface of rainscreen wall structural wythe joints flush.

3.4 Concrete Masonry Lintels

3.4.1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.

3.4.2 End bearing: not less than 200 mm as indicated on drawings.

3.4.4 **Completely fill joints with mortar. This is a mandatory requirement. If inspection reveals that this requirement has not been met the complete masonry panel, partition or wall wherein the omission occurs shall (if instructed by the Consultant) be pulled down and rebuilt in accordance with this Specification at no additional cost to the Owner.**

3.4.8 Set rough bucks, wood blocks, anchors, bolts, tie bars, inserts, clamps, lintels in masonry, furring strips, wood plugs, flashing, sleeves, pipes, ducts, miscellaneous metals and/or other items that may be supplied under other sections for building into masonry drawings for

3.5 Final Inspection

3.5.1 On completion of masonry, it shall be minutely inspected throughout and pointed or repointed as required, filling all holes, raking out loose mortar and repointing joints to make a complete, neat, weather tight job without defects in jointing, to the Consultants approval. All joints in interior masonry shall be pointed, including behind tackboards, markerboards and millwork.

3.5.2 Joints between masonry and concrete or metal, where shrinkage may occur, shall be carefully repointed to eliminate all danger of leakage. Where caulking is required, this pointing shall be recessed at least 12mm to leave space for caulking compound.

3.6 Cleaning

3.6.1 All exposed walls of masonry shall be thoroughly cleaned on completion, starting at the top of the walls and cleaning down uniformly to base.

3.6.2 Clean off all excess mortar and caulking on completion of masonry work.

3.6.3 It is essential that all masonry be protected during construction to avoid the need for excessive cleaning and to reduce efflorescence. If efflorescence appears, prior to completion, the Consultant may withhold from final approval, monies sufficient to cover at least 2 additional cleanings of affected areas during 1 year warranty period.

3.7 Stain Removal

3.7.1 Stains shall be removed as follows:

3.7.1.1 Saturate wall with clear water and scrub.

3.7.1.2 Apply solution of 1/2c. "Calgon" water conditioner and 1/2c "All" detergent dissolved in 1 gal.

Water and scrubbing all remaining stains.

3.7.1.3 Rinse thoroughly with clear pressurized water.

3.7.1.4 If any stains remain, remove using "Sure-Kleen 101" masonry cleaner as directed by manufacturer (Marathon Equipment, Weston, Ontario).

3.8 Clean Up

3.8.1 On completion of the work, remove all surplus materials and all equipment from the site.

END OF SECTION 04220

PART 1 GENERAL

1.1 General Requirements

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2022 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements.

1.2 Description

1.2.1 Work Included

1.2.1 Provide all rough bucks, temporary bracing of door frames, miscellaneous blocking, rough carpentry.

1.3 Source Quality Control

1.3.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

1.3.2 Plywood identification: by grade mark in accordance with applicable CSA standards.

PART 2 PRODUCTS

2.1 Interior Lumber Material

2.1.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:

.1 CSA 0141-2005.
.2 NLGA Standard Grading Rules for Canadian Lumber, current edition.

2.1.2 Furring, blocking, nailing strips, grounds, rough bucks, curbs: No. 2SPF

2.2 Panel Materials

2.2.1 Douglas fir plywood (DFP): to CSA 0121-M2008, standard construction.
Exterior plywood shall be pressure preservative treated to CAN-CSA-080M. Interior plywood shall be DRICON fire retardant treated Trent Manf or D Blaze Fire Retardant Treated D.Fir by Goodfellow.16mm thickness

2.2.2 Canadian softwood plywood (CSP): to CSA 0151-M2009, standard construction.

2.3 Fasteners

2.3.1 Nails, spikes and staples to CSA B111-1974.

2.3.2 Bolts: 12.5mm diameter unless indicated otherwise, complete with nuts and washers.

2.3.3 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

2.3.4 Galvanizing: to CSA G164-M1992, use galvanized fasteners for exterior work

pressure-preservative treated lumber.

2.4 Wood Blocking, Nailers for Exterior Applications

2.4.1 Pressure applied wood preservative: treated **No. 2 Jack Pine** to CSA 0802.2-M.

PART 3 EXECUTION

3.1 Construction

3.1.1 Comply with requirements of Ontario Building Code, Section B, Part 9.

3.2 Furring and Blocking

3.2.1 Install furring plywood sheathing and blocking as required to space-out and support casework, cabinets, fascia, soffits, and other work as required.

3.2.2 Align and plumb faces of furring and blocking to tolerance of 1:600.

3.3 Nailing Strips, Ground and Rough Bucks

3.3.1 Install rough bucks and nailers to rough openings as required.

3.4 Cants, Curbs, Fascia Backing

3.4.1 Install fascia backing, nailers, curbs and other wood supports as required and secure using galvanized steel fasteners.

3.5 Fasteners

3.5.1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

3.5.2 Countersink bolts where necessary to provide clearance for other work.

3.5.3 For plywood where one side is exposed use G1S.

3.6 General

3.6.1 All lumber, plywood materials located within the exterior wall cavity and / or parapet shall be pressure preservative treated.

3.6.2 All bolts, nails, fasteners used on the parapet shall be hot dipped galvanized.

END OF SECTION 06101

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Description

1.2.1 Receive hollow metal doors and frames from section 08111, erect with temporary bracing in scheduled locations.

1.2.2 Receive wood doors from section 08200 and finish hardware from section 08710 and install at scheduled locations.

1.2.3 Receive washroom accessories from section 10900 and install at scheduled locations.

1.2.4 Provide miscellaneous wood trim, casings and blocking. Provide cutting and patching at existing millwork as required to fit new construction.

1.2.5 Install door signage.

1.2.6 All of the above as indicated on the drawings and as specified herein.

1.3 Related Work

1.3.1
.1 Selective Demolition Section 02010
.2 Architectural Woodwork: Section 06400

1.4 Reference Standards

1.4.1 Do finish carpentry to Custom grade millwork standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC) latest edition, except where specified otherwise.

1.5 Product Delivery, Storage and Handling

1.5.1 Protect materials against dampness during and after delivery.

1.5.2 Store materials in ventilated areas, protected from extreme changes of temperature or humidity.

PART 2 PRODUCTS

2.1 Lumber Material

2.1.1 Hardwood Lumber: moisture content 10% or less in accordance with following standards: Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.1 National Hardwood Lumber Association (NHLA), January 1982. Select white maple suitable for stain finish.

2.1.2 Fire Retardant Treated Plywood

DRI-CON fire retardant treated exterior grade douglas fir plywood 16mm thickness, conforming to CAN / ULC S102M. Maximum flame spread 15, max smoke development 10. (Trent Timber Treating, Peterborough, Ontario) or D Blaze by Goodfellow.

2.1.3 Pressure Treated Plywood

16mm thickness exterior grade douglas fir plywood pressure preservative treated to CAN / CSA -080.9-M97.

2.1.4 Softwood Lumber

No. 1 SPF conforming to CSA 141-M2005 kiln dried.

2.1.5 Decorative Plywood - 19mm thickness

Interior grade, flat cut select white maple veneer, hardwood veneer core. CSA - 151, M2009.

2.2 Fasteners

2.2.1 Nails and Staples: to CSA B111-1974; plain finish.

2.2.2 Wood Screws: to CSA B35.4-1972 electroplated.

PART 3 EXECUTION

3.1 Workmanship

3.1.1 Scribe and cut as required to fit abutting walls, and surfaces, to fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.

3.1.2 Form joints to conceal shrinkage.

3.2 Fastening

3.2.1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.

3.2.2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.

3.2.3 Set finishing nails to receive filler. Where screws are used to secure members countersink screw in round cleanly cut hole and plug with wood plug to match material being secured.

3.2.4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.

END OF SECTION 06200

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Description

1.2.1 Work Included

Provide sealants in the following locations at all new construction elements and / or intersection of new construction with existing building components.

a) all new interior masonry control joints
b) all intersections of new masonry with existing construction;
c) exposed joints between intersecting dissimilar materials;
d) joints between hollow metal door frames and wall finishes..
e) intersections between sinks and walls, base of water closets to porcelain tile floor finish.
f) intersections of countertops, splashbacks and wall finish.

1.2.2 Related Work Specified Elsewhere

Bedding of thresholds provided by Section 06200; Glazing sealant beads by Section 08800; sealing of mechanical equipment, fittings by Division 15; sealing around electrical equipment by Division 16; sealing of joists in fire separations by Section 07270.

1.3 Samples

1.3.1 Submit samples of full colour range available of all exposed products for colour selection by Consultant.

1.4 Mock-up

1.4.1 Construct mock-up to show location, size, shape and depth of joints complete with back-up material, primer, caulking and sealant. Mock-up may be part of finished work.

1.4.2 Allow 24 hours for inspection of mock-up by Consultant before proceeding with sealant work.

1.5 Delivery, Storage and Handling

1.5.1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. Protect from freezing, moisture and water.

1.6 Environmental and Safety Requirements

1.6.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.

1.6.2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

PART 2 PRODUCTS

2.1 Sealant Materials

2.1.1 Sealants acceptable for use on this project must be listed on CGSB Qualified Products List issued by CGSB Qualification Board for Joint Sealants. Where sealants are qualified with primers use only these primers.

2.1.2 Interior perimeter of steel and aluminum window frames at intersection with dissimilar materials. TREMCO, Dymonic FC.

2.1.3 Exterior perimeter of exterior steel and aluminum window frames: TREMCO Dymeric 240 FC.

2.1.4 Interior joints: TREMCO Proglaze Silicone Sealant

2.1.5 Exterior Masonry Control Joints

Tremco Dymeric - 240FC

2.1.6 Interior Masonry Control Joints

Tremco Mono

2.1.7 Window Stools / Millwork Intersections with Existing / New Construction

Tremco Proglaze, clear

2.1.8 Control Joints in Concrete Floor Slabs

Tremco THC - 900 self-levelling

2.1.9 Plumbing Fixture Intersections with Finishes

Tremco Tremsil200. Colours shall be selected by Consultant from Manf. standard range available.

2.2 Back-Up Materials

2.2.1 Circular cross section, Polyethylene, Urethane, Neoprene or Vinyl Foam
- .1 Extruded closed cell foam backer rod.
- .2 Size: oversize 30 to 50%.

2.2.2 Bond Breaker Tape

- .1 Polyethylene bond breaker tape which will not bond to sealant.

2.3 Joint Cleaner

2.3.1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.

2.3.2 Primer: as recommended by manufacturer.

PART 3 EXECUTION

3.1 Preparation of Joint Surfaces

3.1.1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.

3.1.2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair work.

3.1.3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.

3.1.4 Ensure joint surfaces are dry and frost free.

3.1.5 Prepare surfaces in accordance with manufacturer's directions.

3.2 Priming

3.2.1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.

3.2.2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.3 Backup Material

3.3.1 Apply bond breaker tape where required to manufacturer's instructions.

3.3.2 Install joint filler to achieve correct joint depth and shape.

3.4 Mixing

3.4.1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.5 Application

3.5.1 Sealant

.1 Apply sealant in accordance with manufacturer's instructions.
.2 Apply sealant in continuous beads.
.3 Apply sealant using gun with proper size nozzle.
.4 Use sufficient pressure to fill voids and joints solid.
.5 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
.6 Tool exposed surfaces to give slightly concave shape.
.7 Remove excess compound promptly as work progresses and upon completion.

3.5.2 Curing

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

3.5.3 Cleanup

.1 Clean adjacent surfaces immediately and leave work neat and clean.
.2 Remove excess and droppings, using recommended cleaners as work progresses.
.3 Remove masking tape after initial set of sealant.

END OF SECTION 07900

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Description

1.2.1 Fabricate hollow metal door frames, hollow metal doors and screens and turn over to Section 06200 Finish Carpentry on site.

1.2.2 Provide all new hollow metal doors, frames and screens as scheduled on the drawings.

1.2.3 The door undercuts shall not exceed 16mm due to privacy requirements for all the doors.

1.2.4 This division shall install a 19mm conduit within the frame scheduled for power door operators from the strike side of the head frame to the electric strike and within the head frame as required to suit the power operator control wiring and separate power supply.

1.3 Related Work

1.3.1	Building-in and grouting frames in masonry	Section 04050 Masonry Procedures
1.3.2	Installation of steel doors, screens and frames	Section 06200 Finish Carpentry
1.3.3	Caulking of joints between frames and building components	Section 07900 Sealants
1.3.4	Supply of finish hardware including weatherstripping and mounting heights	Section 08710 Finish Hardware
1.3.5	Painting	Section 09900

1.4 Quality Assurance

1.4.1 Conform to the requirements of the following **and additional requirements as specified herein:**

.1 ASTM A366-85 Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

.2 CAN4 S104M-M2010 Fire Tests of Door Assemblies.

.3 CAN4 S105M-M2009 Fire Door Frames.

.4 Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA) Canadian Manufacturing Specifications for Steel Door and Frames, latest edition.

.5 NFPA 80 Fire Doors and Windows.

1.5 Requirements of Regulatory Agencies

1.5.1 Steel fire rated doors and frames shall be in conformance with CAN4 S104M-80 revised 2010 and CAN4 S105M-2009 for ratings specified or indicated.

1.5.2 Install labelled steel fire rated doors and frames to NFPA 80, latest edition.

1.6 Shop Drawings

1.6.1 Submit shop drawings in accordance with Section 01300 - Submittals.

1.6.2 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, arrangement of hardware and fire rating.

PART 2 PRODUCTS

2.1 Manufacturers

2.1.1 **Artek, Daybar, Fleming-Baron, Global, Metal Door.**

2.2 Materials

2.2.1 Steel sheet: cold rolled, commercial quality to ASTM A366, matte finish.

Interior Door Locations

2.2.2 Galvanized steel sheet: lock-forming quality to ASTM A527, Coating Designation mill phosphatized. G90

Exterior Door Locations

2.2.3 Galvanized steel sheet: commercial quality to ASTM A526, with Coating Designation G90

Doors:

.1 Door face sheets to all doors 1.6 mm base thickness.
.2 Door face sheets to butt side of door 1.6 mm base thickness.
.3 Door face sheets to non-butt side of door 1.6 mm base thickness.
.4 Vertical stiffeners: 20ga, 150mm o/c.

Non-Rated Door Core:

.1 Hollow steel: vertically stiffened with steel ribs and all voids filled with semi-rigid fibrous insulation minimum density 24 kg/m3.
.2 Bonded core: urethane or isocyanurate board insulation to CGSB 51-GP-21M-78.

Fire Rated Door Core Materials shall comply with NFPA 80/CAH4 S104-M8 and ULC / Intertek label requirements.

Frames:

.1 Steel frames to exterior doors 1.6 mm base thickness (16ga).
.2 Steel frames interior openings 1.6 mm base thickness (16ga).

Provide other door and frame components in accordance with CSDFMA requirements.

Primer:

.1 For galvanized steel sheet: CGSB 1-GP-181 M-77 +Amdt -Mar -78 .

.2 For cold rolled steel sheet: CGSB 1-GP-40M-79 [CGSB 1-GP-148M-80].

2.2 Fabrication

2.2.1 Fabricate doors and frames as detailed, to Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA) Canadian Manufacturing Specifications for Steel Doors and Frames, latest revision; except where specified otherwise, where these specifications exceed CSDFMA provide additional material work specified. Reinforce door and frames to suit hardware requirements specified Section 08710 - Finish Hardware.

2.2.2 Blank, reinforce, drill and tap doors and frames for mortised hardware. Reinforce doors and frames for surface mounted hardware. Provide 10 ga. (3.4mm) hinge reinforcement and 22ga mortar guard boxes strike locations. Exterior egress and vestibule doors and frames shall be fabricated to accommodate 4 hinges per door leaf.

2.2.3 Shop prime cold rolled steel sheet.

2.2.4 Apply, at factory, touch up primer to doors and frames manufactured from galvanized steel where coating has been removed during fabrication.

2.3 Doors

2.3.1 Make provision for glazing as indicated and provide necessary glazing stops. Minimum 0.9mm (20ga).

2.3.2 Construct rail and stile doors in same manner as flush doors.

2.3.3 Construct matching panels in same manner as doors.

2.3.4 **Fabricate all doors with longitudinal edges mechanically interlocked and welded.**

2.3.5 **Fabricate all doors with top and bottom channels flush (and filled solid), extending full width of door and welded to both faces.**

2.4 Frames

2.4.1 Cut mitres and joints accurately and weld continuously on inside of frame profile.

2.4.2 **Grind welded corners and joints to flat plane, fill with metallic paste filler and sand to uniform smooth finish.**

2.4.3 Provide adjustable jamb anchors for fixing at floor minimum 16 ga.

2.4.4 Install 3 bumpers on strike jamb for each single door and 2 bumpers at head for pairs of doors. **Set in silicon sealant to retain bumpers. (Do not install until section 9900 has painted doors).**

2.4.5 Make provision for glazing as indicated and provide necessary glazing stops.

PART 3 EXECUTION

3.1 Installation General

3.1.1 Install rated doors and frames in accordance with National Fire Codes, Volume 4, produced by National Fire Protection Association (NFPA) 80.

3.2 Frame Installation

3.2.1 Set frames plumb, square, level and at correct elevation.

3.2.2 Secure anchorages and connections to adjacent construction.

3.2.3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.

3.2.4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

3.3 Door Installation

3.3.1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08710 - Finish Hardware.

3.3.2 Provide even margins between doors and jambs and doors and finished floor and thresholds as follows.

.1 Hinge side: 1.0 mm.
.2 Latch side and head: 1.5 mm.
.3 Finished floor and thresholds: 13 mm.

3.3.3 Adjust operable parts for correct function.

3.4 Finish Repairs

3.4.1 Touch up with primer galvanized finish damaged during installation.

3.5 Warranty

3.5.1 **Provide written 5-year warranty covering all hollow metal doors, frames and screens against defects of material and workmanship including integrity of galvanized treatments and replacement of defective hinge reinforcement plates.**

END OF SECTION 08111

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction Document CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.1 The work associated with this section shall comply to all pertinent sections and articles in Division 1 - General Requirements

1.2 Work Included

1.2.1 Provide metal stud partition faming complete with all lateral bracing, top and bottom tracks, deflection tracks, fasteners, related accessories at all new partition locations as indicated on the drawings and as specified herein.

152mm galvanized steel studs, 18ga.
92mm galvanized steel studs, 20ga.
64mm galvanized steel studs, 20ga.

1.2.2 Provide supplemental furring, framing, pipe riser enclosures, as required to fit new work to existing construction including interior bulkheads and cutting and patching of existing ceiling finishes. Provide built up sections as described on drawings.

1.2.3 All of the above as described on the drawings and as specified herein.

1.3 Quality Assurance

1.3.1 Conform to requirements of ULC for fire rated systems. Refer to drawings for specific design requirements.

PART 2 PRODUCTS

2.1 Non Bearing Interior Bulkheads / Pipe Space / Furring

2.1.1 Non-load bearing channel stud framing: to ASTM C645-83, roll formed from 18ga thickness galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres. Sizes as indicated on the drawings.

2.1.2 Floor and ceiling tracks: to ASTM C645-83, in widths to suit stud sizes, 32 mm flange height.

2.1.3 Metal channel stiffener: 64 x 22 mm size, 1.4 mm thick cold rolled steel, coated with rust inhibitive coating.

2.1.4 Acoustical sealant: to CGSB 19-GP-21M.

2.1.5 Insulating strip: rubberized, moisture resistance 3 mm thick foam strip, 12 mm wide, with self-stick adhesive on one face, lengths as required.

2.1.6 Metal Framing

22mm x 64mm x 20ga. galvanized sheet steel.
22mm x 64mm x 20ga.
22mm x 92mm x 20ga
22mm x 152mm x 18ga.

2.1.7 Tie wire: 161 wg annealed galvanized wire.

2.1.8 Hangers: minimum 9 gauge galvanized.

2.2 Structural Metal - Stud System Wall

2.2.1 Structural metal studs shall be minimum 18 gauge, 152mm deep spaced at maximum 16" centres. The studs shall be securely fixed at top and finished floor with continuous horizontal bracing through studs at mid-point, or as noted on drawings. Acceptable manufacturer by Bailey Metal Products / Mantane / Claymore or Canadian Steel Manufacturing Inc.

2.2.2 Fasteners

Refer to structural drawings for fastener requirements.

2.2.3 Bridging Channels

38 x 12.5 x 1.22mm continuous through the knockout with 32 x 32 x 1.52 x 140mm long clip angles at each stud. Connect bridging channel to clip angles and clip angles to studs with 2 - #10 S.M.S.

2.2.4 Deflection Tracks

18ga galvanized Z180 as per ASTM 525M. Size to accommodate defection referenced on drawings. Bailey metals Multi Slot Deflection Track MST 250 with 64 mm leg.

PART 3 EXECUTION

3.1 Erection Stud Systems

3.1.1 Align deflection and base tracks and secure at 400 mm o/c maximum.

3.1.2 Place studs vertically at 16" oc and not more than 2" from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions. Distance between top of stud and inner track shall not exceed 4mm. Deflection track shall allow 20mm movement of the stud top track.

3.1.3 Erect metal studding to tolerance of 1:1000.

3.1.4 Co-ordinate erection of studs with installation of windows, curtain wall framing and special supports or anchorage for work specified in other Sections.

3.1.5 Install 12GA closures, lintels and as indicated on drawings.

3.1.6 Install steel studs or furring channel between studs for attaching electrical and other boxes.

3.1.7 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to non-bearing studs. Use 50 mm leg ceiling tracks.

3.1.8 All of the above as described on the drawings.

END OF SECTION 09111

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Work Included at Alteration Areas

1.2.1 Provide gypsum wall, ceiling finishes and bulkheads as indicated on the drawings and as specified herein.

1.2.2 Provide all suspension system components, hanger wires/ suspension anchors/furring/lateral bracing for the above noted locations.

1.2.4 All required cutting and patching of existing gypsum board ceilings/bulkheads pipe spaces as required to fit new construction to existing.

1.3 Related Work

1.3.1 Acoustic ceilings section # 09130.

1.4 Reference Standards

1.4.1 Do work in accordance with CSA A82.31-M1980 except where specified otherwise.

1.4.2 Conform to the requirements of ULC and OBC Supplementary Guidelines for fire rated systems. Refer to drawings for specific design requirements.

PART 2 PRODUCTS

2.1 Fire Rated Gypsum Board - Abuse Resistant

2.1.1 5/8" sheet rock firecode X core gypsum panels, 4'-0" wide x maximum practical length as manuf by Canadian Gypsum Company or equal by Certainteed, Westroc Inc.

2.1.2 Water Resistant

Sheetrock Brand W/R Gypsum panels 5/8" thick. 4' wide x maximum practical length as manuf. by Canadian Gypsum Company or manuf. listed above.

2.2 Metal Furring and Suspension Systems

2.2.1 Metal furring runners, hangers, tie wires, inserts, anchors: to CSA A82.30-M1980, galvanized by section 09111, Metal Stud Systems.

2.2.2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.

2.3 Fastenings and Adhesives

2.3.1 Nails, screws and staples: to CSA A82.32-M1980.

2.3.2 Stud adhesive: to CGSB 71-GP-25M-77.

2.3.3 Laminating compound: as recommended by substrate manufacturer, asbestos-free.

2.4 Accessories

2.4.1 Casing beads, corner beads fill type: 0.5 mm base thickness commercial grade sheet steel with Z275 zinc finish to ASTM A525-86, perforated flanges; one piece length per location.

2.4.2 Joint compound: to CSA A82.32-M1980, asbestos-free.

PART 3 EXECUTION

3.1 Suspended and Furred Ceilings

3.1.1 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with CSA A82.81-M1980 except where specified otherwise.

3.1.2 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.

3.1.3 Install work level to tolerance of 1:1200.

3.1.4 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles.

3.1.5 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.

3.2 Ceiling / Bulkheads / Pipe Spaces

3.2.1 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.

3.2.2 Furr for suspended ceilings and form gypsum board fire and sound stops and to form plenum areas as indicated.

3.3 Gypsum Board Application

3.3.1 Do not apply gypsum board until electrical and mechanical work are reviewed by Consultant and authorities having jurisdiction ie. Hydro Inspection and pipe insulation, plumbing inspection approvals have been obtained.

3.3.2 Non Rated Assemblies:

Apply single layer gypsum board layer as scheduled on the drawings to metal furring or framing using screw fasteners. Maximum spacing of screws 300 mm o/c.

3.3.3 Fire Rated Wall Assemblies

1 hr. rated partition assembly ULC W 407

3.4.2 Abuse Resistant Walls

Erect furring maximum 400mm centres. Install wallboard with fasteners maximum 300 centres.

3.5 Accessories

3.5.1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners

accurately, free from rough edges. Secure at 150 mm oc.

3.5.2 Install casing beads around perimeter of suspended ceilings.

3.5.3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated.

3.6 Control Joints

3.6.1 Construct control joints of preformed units set in gypsum board facing and supported independently on both sides of joint.

3.6.2 Provide continuous polyethylene dust barrier behind and across control joints.

3.6.3 Locate control joints where indicated and at changes in substrate construction.

3.6.4 Install control joints straight and true.

3.7 Taping and Filling

3.7.1 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.

3.7.2 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.

3.7.3 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.

3.7.4 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.

3.7.5 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

END OF SECTION 09250

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Work Included

1.2.1 Provide new porcelain tile floor and wall finishes in the new all gender washroom and the new Universal washroom.

1.2.5 All of the above as described on the drawings and as specified herein complete with uncoupling membranes, trim components and edge reducer strips.

1.3 Related Work

1.3.1 Section 03302, Cast-In-Place Concrete.

1.4 Reference Standards

1.4.1 Do tile work in accordance with Installation Manual 2011, "Ceramic Tile", produced by Terrazzo Tile and Marble Association of Canada (TTMAC), except where specified otherwise.

1.4 Samples

1.4.1 Submit samples in accordance with Section 01300 - Submittals for colour selection by Consultant.

1.5 Environmental Conditions

1.5.1 Maintain air temperature and structural base temperature at ceramic tile installation area above 21 Celsius for 48 hours before, during and 48 hours after installation.

PART 2 PRODUCTS

2.1 **WASHROOM WALL TILE LOCATIONS**:

As stipulated on the drawings including porcelain tile cove base.

2.2 **WASHROOM FLOOR TILE LOCATIONS**

2.2.1 As stipulated on the drawings , pattern as indicated on the interior elevations and renderings.

2.3 **Edge Trim Schulter Rondec – DB Aluminum**

2.4 Mortar Adhesive

2.4.1 Ardex X-4 thin set mortar
Schulter ditra uncoupling membrane on floor locations.

2.5 Grout

2.5.1 Tec Accucolour one colour to owner’s selection from standard range available

2.6 Edge Reducer Strips/Floors:

2.6.1 Reno U trim, clear anodized aluminum, tel: 10800-667-8746

2.7 Wall Tile Backer Board

2.7.1 Schulter KERDI-BOARD 9mm thickness fully embedded in thin set mortar (at existing uneven substrate locations).or Duroc 16mm cement board tile backer. Required at locations where wall tile is scheduled over existing or new masonry.

2.8 Grout

2.8.1 Mapei, Keracolour S colour to owners selection from manuf. standard range

2.9 Mortar

2.9.1 Mapei Kerabond/Keralastic system.

2.10 **Floor Control Joints:**
2.10.1 Schulter Dilex KSN with flexible black inserts. Spacing maximum 6000mm on centre.

2.11 **Cove base cap trim .**
2.11.1 Schulter Quadec J Trim full length of porcelain tile cove base.

2.12 **Edge Reducer Transition Strips:**
2.12.1 Schulter reno U Trim required at intersections between porcelain tile flooring and epoxy floor intersection at new door openings.

PART 3 EXECUTION

3.1 Workmanship

3.1.1 Examine the slabs on which the tile is to be laid and report any defects to the Architect.

3.1.2 All surfaces must be clean and free from dust, oil, grease, paint or other substances which may reduce or prevent adhesion.

3.1.3 Apply tile to clean and sound surfaces.

3.1.4 Fit tile around corners, fitments, fixtures, drains and other built-in objects. Maintain uniform joint appearance. Cut edges smooth and even.

3.1.5 Maximum surface tolerance 1:800.

3.1.6 Make joints between tile uniform and approximately 1.5 mm wide for wall tiles, plumb, straight, true, even and flush with adjacent tile. Refer to drawings for patterns.

3.1.7 Lay out tiles so perimeter tiles are minimum 1/2 size.

3.1.8 Sound tiles after setting and replace hollow-sounding units to obtain full bond.

3.1.9 Make internal angles square.

3.1.10 Install metal divider strips at junction of porcelain tile flooring and dissimilar materials.

3.1.11 Allow minimum 24 hours after installation of tiles, before grouting.

3.1.12 Clean installed tile surfaces after installation and grouting cured.

3.1.13 Installation shall be according to Manual 200-15 Thin Set prepared by the Terrazzo Tile and Marble Association of Canada. Control joints to be installed as recommended by the Association.

3.3 Grouting

3.3.1 Do not grout the tile sooner than 24 hours after setting of the adhesive. Clean joints of dust, dirt and excessive adhesive.

3.3.2 Mix grout with clean water to the consistency of thick cream. Grout to be coloured as selected by Architect.

3.3.3 Fill joints and allow to set a few minutes. Remove surplus grout and finish flush and true. As soon as grout has reached its initial set, wash tile surface with a sponge and clean water. Polish with clean dry cloths.

3.3.4 All floor tile shall be grouted with a waterproof grout. Use only an approved type admixture.

3.4 Protection

3.4.1 Protect adjoining work from damage from rough material and water. Make good damage to other work caused by doing this work.

3.5 Cove Base Tiles

3.5.1 Install in accordance with TTMAC. Accurately cut all corners. Set plumb and true. Grind exposed edges where necessary to avoid exposed sharp edges.

END OF SECTION 09310

PART 1 GENERAL

1.1 Conditions

1.1.1 All General Conditions of the Stipulated Price contract incorporated in the Canadian Standard Construction CCDC2-2020 and the Supplementary General Conditions included in this Specification shall form part of and govern all Sections of these specifications.

1.1.2 The work associated with this section shall comply with the pertinent sections and articles in Division 1 - General Requirements.

1.2 Work Included

1.2.1 Provide paint finish within the Washroom Alteration Areas. Paint all new and existing interior concrete block construction from finish floor to 50 mm above the underside of ceiling. Paint new gypsum board bulkheads, new gypsum board wall and ceiling finishes, gypsum board repair areas at cutting and patching locations. Fill holes in masonry at anchor removal locations.

1.2.2 Paint all new hollow metal door frames and screens

1.2.3 All of the above as indicated on the drawings and as specified herein.

1.2.7 All required cutting and patching areas shall be painted in accordance with the provisions of this section.

1.3 Work Not Included

1.3.1 Do not paint structural steel scheduled for fire proofing.

1.3.2 Do not paint acoustic ceilings, anodized aluminum, baked enamel finished metals, plastics, toilet partitions, hardware or other surfaces obviously not intended to be painted, except as noted otherwise.

1.3.3 Do not paint natural clay brick finishes.

1.3.4 Do not paint prefinished convector cabinets.

1.3.5 Do not paint prefinished wood doors by section 08200.

1.3.6 Architectural woodwork is factory prefinished by section 06400.

1.4 Colour Schedule

1.4.1 A colour schedule will be issued by the Consultant. A maximum of 1 wall colours will be used. Allow maximum of 10% deep tint paints for wall colour selection

1.5 Samples

1.5.1 Submit 2 paint samples of each colour in accordance with Section 01300. Paint samples shall be on an 8 1/2" x 11" format.

1.6 Environmental Requirements

1.6.1 Do not apply paint finish in areas where dust is being generated. Moisture content shall be verified prior to commencement of work of this section. Building temperature shall be maintained at minimum 15 degrees Celsius.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Paint materials for each coating formulae to be products of Glidden manufacturer or equal by Sico, Benjamin Moore, Dulux or Sherwin Williams.

PART 3 EXECUTION

3.1 Preparation of Surfaces

3.1.1 Existing previously painted concrete block plaster and drywall surfaces shall be sanded with #80 grit. All former fastener holes shall be filled with durabond 90 and sanded. Cracks shall be filled with paintable sealant.

3.1.2 Wall surface shall be washed with tri-sodium phosphate and water to degrease surface in preparation for primer application.

3.2 Application

3.2.1 Sand and dust between each coat to remove defects visible from distance up to 1.0 metre.

3.2.2 Finish bottoms, edges, tops and cutouts of doors after fitting as specified for door surfaces.

3.3 Interior Finish Schedule

3.3.1 **New Gypsum Wall Finishes**

1 coat Glidden Professional Lifemaster NoVOC #9116
2 coats Glidden Professional Lifemaster NoVOC #9200, semi-gloss

Existing Gypsum Board Wall Finishes

2 coats Glidden Professional Lifemaster No. VOC #9200, semi-gloss

New Gypsum Board Ceiling Finishes

1 coat Glidden Professional Lifemaster No VOC #9116
2 coats Glidden Professional Lifemaster No VOC #9300, egg shell

New Concrete Block Wall Finishes

1 coat Glidden Professional Lifemaster No VOC #3010, block filler
2 coats Glidden Professional Lifemaster NoVOC #9200, semi-gloss

Existing Concrete Block Wall Finishes

2 coats Devoe WB acrylic #4216 semi-gloss

Unprimed Ferrous Metal Doors and Frames - Interior Locations

1 coat Devoe DEVFLEX #4020 primer
2 coats Glidden Professional Diamond 3450 7400 semi-gloss

Exterior Hollow Metal Doors, Frames (New and Existing)

1 coat Devoe DEVGUARD Low Voc, universal primer #4360
2 coats Devoe DEVGUARD rust preventative enamel #4306 semi-gloss

Existing Hollow Metal Doors / Door Frames - Interior Locations

1 coat Devoe DEVFLEX #4020 primer
2 coats Glidden Profressional Diamond 3450 7400 semi-gloss

Handrails and Risers / Ferrous Metals

1 coat Devoe DEVFLEX #4020 primer
2 coats Glidden Professional Lifemaster NoVOC #9400, gloss

Galvanized Steel Deck / OWSJ

1 coat Devoe DEVFLEX #4020 primer
2 coats Devoe DEVFLEX High Performance WB acrylic #4212 eggshell

3.4 Climatic Conditions

3.4.1 Exterior finish shall not be applied while the surface is damp, or during cold, rainy or frosty winter weather or when the temperature is likely to drop to freezing. Avoid finishing surfaces while they are exposed to hot sun.

3.5 Unpainted Metals

3.5.1 Anodized aluminum, bronze, chromium plate, nickel, stainless steel and monel metal, shall not be painted or finished unless specified. Otherwise all exposed piping, conduit, and lintels shall be painted.

3.6 General

3.6.1 Paint finish shall be applied by roller except in the case of wood trim, metal frames, stair stringers, and similar work of small surface area which shall be painted by brush. Do not use roller for applying finish other than paint.

3.6.2 Spray painting will be permitted subject to adequate measures to control overspray.

3.6.3 Permit paint to dry between coats. Touch up suction spots after applying first coat. Tint various coats of multiple coat work in light shades of the final colour selected, to distinguish between coats. Give Consultant due notice and sufficient opportunity (maximum 48 hours) to inspect each coat. Do not proceed with subsequent coat unit preceding coat approved. Consultant reserves the right to order complete retreatment if this condition is not observed.

3.6.4 Painting coats are intended to cover surfaces perfectly; if in painter's opinion, formula specified is inadequate to provide a first class finished surface, report to the Consultant before commencing work. Surface imperfectly covered shall receive additional coats at no additional costs.

3.6.5 Use paint unadulterated. Use same brand of paint for primer, intermediate and finish coats. Factory mix all paints.

3.6.6 All surfaces finished by this section shall be uniform in sheen, colour, and texture, free from brush or roller marks, runs, join marks or other defects.

3.7 Patching

3.7.1 Repairs made during construction or warranty period shall be refinished in a manner such that the repair is not visible at a distance of 3'-0" (1.0 metres).

3.7.2 If repair is not acceptable, repaint entire wall section, ceiling or bulkhead as applicable.

3.8 Maintenance Supplies

3.8.1 Supply one 4L can of each colour to the Owner upon completion of the work. Place where directed on site.

3.9 Clean-Up

3.9.1 Remove all paint rags, used thinners, used rollers, brushes, debris and empty paint cans from the job site on a daily basis.

END OF SECTION 09900