

# ROOM RENOVATIONS

## ALL SAINTS CATHOLIC SECONDARY SCHOOL

3001 COUNTRY LANE  
WHITBY, ON



**DURHAM CATHOLIC  
DISTRICT SCHOOL BOARD**  
*Learning and Living in Faith*



**ROOM RENOVATIONS**  
**ALL SAINTS CATHOLIC SECONDARY SCHOOL**  
3001 COUNTRY LANE  
WHITBY ONTARIO  
FOR  
**DURHAM CATHOLIC DISTRICT SCHOOL BOARD**

**TENDER No. T26-11**

**ARCHITECT PROJECT No. 26103**

**MAY 2026**

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ALL SAINTS CATHOLIC SECONDARY SCHOOL  
DURHAM CATHOLIC DISTRICT SCHOOL BOARD**

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## GENERAL INSTRUCTIONS

### SECTION 01 00 05-1

#### 1.00 GENERAL INSTRUCTIONS

(a) Co-operate with other trades as required for completion of work.

(b) The specification is divided into sections of work and a section may consist of the work of more than one sub-contractor. The responsibility as to which sub-contractor provides labour, materials, equipment, and services required to complete the work rests solely with the Contractor.

#### 2.00 TENDER DOCUMENTS

(a) Drawings and specifications will be made available in electronic format only.

#### 3.00 SITE LOCATION

The site is located in Whitby, at 3001 Country Lane..

#### 4.00 OWNER

The Owner is the Durham Catholic District School Board.

#### 5.00 ACCESS TO SITE

(a) Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to the location of the work, where indicated on the drawings and on the site, as required for construction activities, to the approval of the Authorities having Jurisdiction and the Consultant.

(b) Access to construction area shall be from Country Lane. Restore all curbs, sidewalk, and asphalt damaged by construction activities in accordance with specifications for new work and to the approval of the Town.

(c) Pay to the Town, the cost of all required permits, deposits, security, etc. for access to the site.

#### 6.00 ACCESS TO BUILDING AND USE OF THE WORK

(a) The Owner, Consultant and all authorities having jurisdiction shall have access to the work at all times, whether it is on or off the site.

(b) The Owner and other Contractors shall have the right to enter, use and occupy the 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.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-2

#### 6.00 ACCESS TO BUILDING AND USE OF THE WORK (Cont'd)

(c) The Contractor shall provide free and safe access to the areas within the building should the Owner require occupation prior to 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.

(d) 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 time.

#### 7.00 PROTECTION OF THE PUBLIC DURING CONSTRUCTION

(a) The Contractor shall be responsible for the supply and installation of all necessary fencing, hoarding, scaffolding, etc., as required by the Authorities Having Jurisdiction.

(b) The Contractor shall at all times carry out his work in a manner which offers minimum hazard and interference to the normal operation of the school and shall comply with the Owner's direction in all matters related to safety, interference, scheduling and conduct.

(c) The Contractor will be responsible to take all necessary steps to protect personnel, workers, visitors, general public, etc., and property, from harm during the course of the Contract.

(d) All work procedures and equipment will be in accordance with the Ontario Health and Safety Act and Regulations for Construction Projects.

(e) The Contractor will monitor to ensure that safety requirements are being met and that safety records are being properly kept and maintained.

(f) The Contractor will report to the Owner and other jurisdictional authorities, all accidents or incidents involving the Contractor, the Owner, the public, personnel and/or property, arising from the Contractor's execution of the work.

(g) The Contractor will include all provisions of this contract in all agreements with Subcontractors equally responsible for safe work performance.

(h) If the Contractor is responsible for a delay in the process of the work due to an infraction of legislated health and safety requirements, the Contractor will, without additional cost to the owner, work such overtime as required in the opinion of the Owner's representative to avoid delay in the final completion of work or any operations thereof.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-3

#### 8.00 CONSTRUCTION TRAFFIC

(a) The Contractor shall exert and maintain extreme vigilance and caution to ensure adequate and constant protection for pedestrian traffic that may be necessary during construction.

(b) The Contractor shall provide a uniformed **flagman** to assist vehicular traffic coming to or leaving the site full time during days when school is in session.

(c) Construction traffic shall be restricted to the designated construction access route. Drivers of motor vehicles shall not operate their vehicles beyond the designated area. Such vehicles shall be operated with due caution at all times while on school property. Speed limits must not exceed 5 kph, at any time.

(d) Delivery and service vehicles must not enter or leave school property when students are in the area.

(e) The Contractors staff will not be permitted to park on the site outside of the designated construction area. The Contractors staff will not be permitted to park on either side of the municipal streets in the area of the school. The Contractor shall strictly enforce these *No Parking* zones.

(f) The Contractor shall not allow any vehicles to stand with the engine running within 12 metres of the existing building or portable classrooms.

(g) Deliveries to the site shall be restricted to the following times when the school is in operation. Times are approximate and must be confirmed with the school administration prior to commencing work on site.

Before 8:00 am

Between 9:00 and 11:00 am

Between 1:00 and 3:00 pm

After 4:30 pm

**Deliveries are not to be scheduled for any other times when school is in session.**

## **GENERAL INSTRUCTIONS**

### **SECTION 01 00 05-4**

#### **9.00 CO-ORDINATION OF THE WORK**

(a) The location of fixtures, outlets, conduit, piping, etc. shown or specified but not dimensioned, shall be considered approximate. The actual location shall be as approved by the Consultant and as required to suit job conditions.

(b) The Contractor shall carefully study and compare all architectural, mechanical and electrical drawings, specifications and other instructions and shall report at once to the Consultant, any conflicts, interference, etc. between the various parts of the work.

(c) The Contractor shall provide coordination drawings for all aspects of the work. The drawings shall be original, detailed comparisons of the work of the various trades and shall recognize that the tender documents may be in conflict with the selected equipment and required clearances to the extent that coordination is necessary. The Contractor shall provide sketches showing resolution of such conflicts.

#### **10.00 MANUFACTURER'S INSTRUCTIONS**

(a) Unless otherwise indicated in the specification, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

(b) Notify the Consultant in writing, of conflicts between the specification and manufacture's instructions, so that the consultant may establish the course of action.

(c) Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Consultant to request removal and re-installation at no increase in contract price.

#### **11.00 AVAILABILITY**

(a) Immediately upon receipt of authorization from Owner to proceed, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of the work.

(b) In the event of failure to notify the Consultant at commencement of work and should it subsequently appear that work may be delayed for such reason, the Consultant reserves the right to substitute more readily available products of similar character, at no increase in contract price.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-5

#### 12.00 VARIATIONS FROM MATERIALS SPECIFIED

(a) It is intended that materials or products specified by the name of the manufacturer, the brand or trade name or catalogue reference shall be the basis of the stipulated sum and shall be provided under the contract. Where three or more brands or manufacturers are specified, the choice of these shall be the option of the Contractor.

(b) Substitutions for materials, manufacturers or equipment specified may **only** be proposed by the Contractor under the following conditions:-

(1) The stipulated sum shall be based strictly on the materials and equipment **specified**.

(2) The proposed substitutions shall be listed in Appendix B of the Tender Form.

(3) A substitution shall show product name and complete specification and shall state what difference if any, will be made in the amount of the stipulated sum for each substitution, should it be accepted.

(4) Provide complete information on required revisions to other work to accommodate each substitution, the cost of additions to or reductions from the stipulated sum, including required revisions to other work.

(5) Unless substitutions are indicated in this manner and subsequently specifically accepted in writing by the Owner and Consultant, **provide products as specified**.

(6) Acceptance by the Owner of a tender amount is in no way to be interpreted as acceptance of any substitutions from materials specified, proposed or made by the bidder, unless specifically accepted in writing by the Owner and Consultant.

(7) Acceptance of the tender is based upon the assumption that all products specified shall be provided. Acceptance of tender does not mean acceptance by Consultant or Owner of products other than those specified.

(c) If substitutions are carried in the tender without first obtaining approval from the Consultant before tender closing, the Tender may be rejected. This condition is for the benefit of the Owner and may be waived by the Owner in accordance with its discretion.

(d) Acceptance by the Owner of the tender amount does in no way mean acceptance of any substitutions for materials specified, made by the Contractor or any Subcontractor.

#### 13.00 SHOP DRAWINGS AND SAMPLES

(a) Submit to the Consultant, samples and shop drawings for review. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the work. Failure to submit in ample time is not considered sufficient reason for an extension of contract time and no claim for extension by reason of such default will be allowed. Provide a schedule of shop drawings to the Consultant for review, listing all items to be submitted and dates for submission.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-6

#### 13.00 SHOP DRAWINGS AND SAMPLES (Cont'd)

- (b) Work affected by the submittal shall not proceed until review is complete.
- (c) Review submittals prior to submission to the Consultant. This review represents that necessary requirements have been determined and verified and that each submittal has been checked and coordinated with the requirements of the work and the contract documents. Submittals not stamped, signed, dated and identified as to the specific project will be returned without being examined and shall be considered rejected. By reviewing and submitting shop drawings, product data, samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto and has checked and coordinated the information contained within the submittals with the requirements of the Work and of the Contract Document.
- (d) Verify that field measurements and affected adjacent work are coordinated.
- (e) Contractor's responsibility for errors, omissions and deviations from requirements of contract documents in submission is not relieved by Consultant's review.
- (f) Keep one review hard copy of each submission on site.
- (g) Shop drawings shall indicate materials, methods of construction and attachment of anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of the section under which the adjacent items will be supplied and installed. Indicate cross references to drawings and specifications.
- (h) Adjustments made on shop drawings by the Consultant are not intended to change the contract price. If adjustments affect the value of the work, state such in writing to the Consultant prior to proceeding with the work.
- (i) Submit copies of the product data sheets or brochures for requirements requested in specification and as the Consultant may reasonably request where shop drawings will not be prepared due to standardized manufacture of product.
- (j) Submit for review samples in triplicate as requested in the specification. Label samples as to origin and intended use in the work.
- (k) Deliver samples prepaid to Consultant's business address.
- (l) Notify the Consultant in writing at the time of submission of deviations in samples from the requirements of contract documents.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-7

#### 13.00 SHOP DRAWINGS AND SAMPLES (Cont'd)

(m) Adjustments made on samples by the Consultant are not intended to change the contract price. If adjustments affect the value of the work, state such in writing to the Consultant prior to proceeding with the work.

(n) Make changes in samples which the Consultant may require and resubmit for review.

(o) The Contractor shall be responsible for all costs for delivery and pickup of submissions for their review, to and from the offices of the Consultants.

(p) The Consultants will not provide CAD copies of the construction documents for use in the production of shop drawings.

(q) Only electronic copies of shop drawings will be accepted for review.

#### 14.00 PROJECT MEETINGS

(a) The Consultant shall schedule and administer regular project meetings throughout the progress of the work.

(b) The Consultant shall preside at meetings and the Contractor shall record the minutes.

(c) Representatives of the Contractor, Subcontractors and suppliers shall attend meetings as required by the Consultant. Representatives shall be qualified and authorized to act on behalf of the party they represent.

(d) The Contractor shall provide, at the first project meeting on the site, a Construction Schedule, indicating the timing of all major activities, showing all critical events and their inter-relationship, in sufficient detail to monitor and assess the Contractor's performance. Schedules shall be updated every 2 weeks and presented for discussion at the project meetings. All subcontractors must be made aware of the schedule, agree that it is feasible and provide a written commitment to follow it.

(e) The Contractor shall attend all job site meetings and any meetings of the Board of the Owner when reasonably called upon to do so to discuss the construction progress and schedule.

(f) Project meetings shall continue on site until **Total Performance** of the Contract is attained.

(g) The Contractor shall preside over pre-installation conferences and coordination meetings throughout the duration of the project. Coordination of all work must be reviewed through regular meetings of the Contractor's authorized project representative and the project representatives of all their sub-contractor's. Additional meetings may be required for subcontractors whose work might interfere with another at a given time.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-8

#### 15.00 SAFETY

(a) The Contractor shall submit "Notice of Project" form to the Ministry of Labour two (2) weeks before work begins. Copies of this form must be submitted to the Owner.

(b) The Contractor shall be responsible for ensuring compliance with the Occupational Health & Safety Act and any regulations made thereunder. The Contractor shall comply with the requirements of the Work Place Hazardous Material Information System (WHMIS) and for each product to be used on the job which is designated as "controlled" by the legislation, shall provide at the site a Material safety Data Sheet for inspection by any employee of the Owner.

(c) The Contractor shall be responsible for observing and enforcing construction safety measures as required by the Canadian Construction Safety Code, the Provincial government, the Workplace Safety and Insurance Board, the Industrial Accident Prevention Association, and any other regulatory authorities having jurisdiction. In the event of conflict between any provisions of the foregoing authorities, the most stringent provision will apply.

(d) The Contractor shall report to the Owner, and jurisdictional authorities, any accident or incident involving Contractor, Owner or public personnel and/or property, arising from the Contractor's execution of the work.

(e) No person is allowed to smoke at any time on York Region District School Board property. It is the Contractor's responsibility to ensure that his employees and subcontractors comply with this policy.

#### 16.00 SAFETY DATA SHEETS

(a) The Contractor shall ensure that material and safety data sheets are submitted prior to commencing installation and application of at least the following:

- .Lead-free solder
- .Resilient flooring
- .Fertilizers
- .Pesticides and herbicides
- .Sealants and caulking
- .Paint
- .Glues and adhesives
- .Any other products which may give off air borne particles after installation

(b) The Contractor and all Subcontractors must note specifically that asbestos, asbestos containing materials, solder for piping containing lead, paint and coatings containing lead or mercury, must be excluded from any part of the work.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-9

#### 16.00 SAFETY DATA SHEETS (Cont'd)

(c) The Contractor shall submit Certificates of Compliance, prior to the application for Substantial Performance, for each of the following items:

.An affidavit relative to the use of lead-free solder for all domestic water lines, regardless of location.

.Products for which Material Safety Data Sheets have been submitted and accepted.

.Other work or products identified in the contract documents as requiring a Certificate of Compliance.

(d) Each Certificate of Compliance must indicate names and addresses of the Project, the Owner, the date of issue, product description including name, number and manufacturer, with a statement verifying that the work or product installed meets specified requirements and, if applicable, complies with the submitted and accepted Material Safety Data Sheets.

(e) Each Certificate of Compliance must be issued on the firms letterhead, properly executed, under whose work the respective work or product has been provided. Each Certificate of Compliance must be endorsed by the Contractor with his authorized stamp and signature.

(f) The Contractor must ensure that submissions are made to allow sufficient time for review without delaying progress of scheduled completion and that WHMIS sheets are kept on site at all times.

(g) A portion of the contract amount will not be paid to the Contractor without submission of all required affidavits and requested Material Safety Data Sheets.

(h) The Contractor shall ensure that all workers are adequately trained and instructed in accordance with WHMIS requirements, and if requested, provide the Owner with detailed information with respect to the training provided to workers, the languages in which instruction is given, and a copy of the training manuals used.

(i) The Contractor shall have the responsibility to ensure that controlled products that are not properly labeled in accordance with WHMIS requirements are not brought to the site.

#### 17.00 COMPLETION

(a) Work of the contract shall start immediately upon notification from the Owner of authorization to proceed.

(b) A **letter of intent** will be issued when the Owner approves the recommendation to accept a bid.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-10

#### 17.00 **COMPLETION** (cont'd)

(c) The work on site cannot commence before 29 June 2026. The Contractor shall schedule and co-ordinate the work to ensure **Total Performance** of the Contract is attained before **4 September 2026**.

(d) Total Performance of the Contract includes all work under the Contract, Cash Allowance work, changes to the Contract and correction of all deficiencies in the Work.

#### 18.00 **EXAMINATION OF THE SITE**

(a) Bidders must visit the site to be assured that the Work is based on the existing conditions as shown on the drawings and visible at the Place of Work at the time of the closing of the tender.

(b) Bidders, finding discrepancies between the Tender Documents and actual site conditions, shall immediately inform the Consultant, **in writing**, describing such changes in detail.

(c) Should site conditions change between the closing of tenders and mobilization on site, the Contractor must inform the Owner and Consultants, **in writing**, of any such changes. Prior to moving onto the site, the Contractor must certify, **in writing**, acceptance of the site if site conditions do not vary from the Bid Documents.

(d) Bids shall include the cost imposed by existing conditions and limitations of site and the accepted bid shall be held to have included all such costs.

(e) The existing conditions shown on the drawings are furnished in good faith for the guidance of the Contractor. This information, however, shall in no way relieve him of the responsibility of ascertaining, to his own satisfaction, the nature of all conditions at the site.

#### 19.00 **WORK IN EXISTING BUILDING**

(a) The work shown on the drawings and specifically listed in the subtrade specifications may or may not be all the work required to be done in the existing building, but the Contractor shall ensure that each Subcontractor make good all the work of this trade and executes all necessary work to make a complete job.

(b) The Contractor shall ensure that all work in the existing building such as floors, finishes, ceilings, trim, etc., is protected as completely as possible to hold the replacing of damage in the existing building to a minimum.

(c) The Contractor shall visit the site and fully inform themselves as to all existing conditions and limitations and shall include for these in the tender cost. Areas in the existing building where new work or finishes are specified shall also include the removal of existing work or finishes as required to carry out the new work. (i.e. areas with new ceilings specified require the existing ceiling to be removed, etc.)

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-11

#### 20.00 **SECURITY**

- (a) The Contractor is responsible for securing all doors and windows when he leaves the school.
- (b) The Contractor must provide a list to the chief Custodian of sub-contractor names and tradespersons names of those that will be working in the school after normal working hours.
- (c) The Contractor must prepare a comprehensive list of the names of all sub-contractors and their after-hours phone numbers.
- (d) The Contractor must police the job site and his own employees.
- (e) The following security precautions will be in effect when the Contractor is working, other than July and August:
  - i) All classroom, storage, corridor and office doors will remain locked. The Contractor must submit a written request for the doors that require unlocking.
  - ii) Work is permitted after school hours and on weekends only when authorized by the Board in writing.
  - iii) All valuables may be stored in portable storage containers before the Contractor begins working in the school.
  - iv) If the contractor or any sub-contractors discover any item of a valuable nature, it must be reported promptly to the chief Custodian for safe keeping.
  - v) The cost incurred by the Board to replace missing items will be deducted from the contractor's contract.
  - vi) The use of school equipment is strictly prohibited. The Contractor will be held responsible for any missing or damaged equipment.
- (f) After hour and weekend work may require the presence of a Custodian or Security personnel on the site. The Contractor shall be responsible for the cost of the Custodians or Security personnel time during the work, at the Owners rate for overtime work. Reimbursement to the Owner for this cost shall be by change order credit at the end of the project.

#### 21.00 **STANDARDS**

- (a) The Contractor shall have available at all times on site, copies of all CSA, ASTM, etc. standards quoted and referred to in the specifications and on the drawings. The standards shall be for the use of the workers and the Consultants, to ensure compliance with the contract requirements.

## GENERAL INSTRUCTIONS

### SECTION 01 00 05-12

#### 22.00 **BUILDING PERMIT**

- (a) The Owner or their representative shall apply for the Building Permit to the Building Department of the Town of Whitby. The Owner shall pay the permit fee.
- (b) All work in connection with this building must be done in strict accordance with local by-laws, and the latest regulations of the Province of Ontario governing this type of construction.
- (c) If any matters in these specifications are contrary to the local or provincial laws or regulations, then the requirements of such laws, rules, regulations, by-laws or ordinances shall take precedence over the specifications.
- (d) All other necessary permits, licenses, certificates or inspections and approvals, etc., shall be procured and paid for by the Contractor, who shall give all notices required by the regulations of the municipal, regional, provincial, or federal authorities.
- (e) The schedule of the issuance of the Building Permit is under the control of the Town and as such, the Owner and Architect are not responsible for delays in the commencement of the work related to the timing of the issuance of the building permit.

#### 23.00 **SMOKING and VAPING**

- (a) Smoking and vaping is prohibited anywhere on the Owners property, including the construction area, building interior, building roofs, inside workers vehicles when parked on the Owners property, inside contractors' temporary offices on site, etc.,

#### 24.00 **SCHEDULES**

- (a) The Contractor shall provide, at the first project meeting on the site, a Construction Schedule, indicating the timing of all major activities, showing all critical events and their inter-relationship, in sufficient detail to monitor and assess the Contractor's performance.
- (b) The schedule shall indicate all tasks on the critical path. Provide a separate bar for each major operation and item of work. Split horizontally for projected and actual performance. Provide horizontal time scale identifying first Working Day of each week.
- (c) Show complete sequence of construction by activity, identifying work of separate stages, and other logically grouped activities for each addition. Indicate the early and late start, early and late finish, float dates, and duration.
- (d) Schedules shall be updated every 2 weeks and presented for discussion at the project meetings. All subcontractors must be made aware of the schedule, agree that it is feasible and provide a written commitment to follow it.
- (e) Prepare construction schedule in form of a horizontal Gantt bar chart using Microsoft Project software.

## CONTRACT CLOSEOUT

### SECTION 01 00 10-1

#### 1.00 GENERAL

(a) 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 Performance.
- Stage 2 Contractor's Application for Certificate of Substantial Performance
- Stage 3 Consultant's Certificate of Substantial Performance
- Stage 4 Consultant's Certificate for Payment of Holdback Moneys.
- Stage 5 Final Inspection for Total Performance.
- Stage 6 Consultant's Final Payment Certificate
- Stage 7 Warranty Period(s).

#### 2.00 DEFINITIONS

(a) A **DEFECT** is an item of work required by a contract, which has been installed but which stands in need of repair or replacement at a specific time.

(b) A **DEFICIENCY** is an item of work required by a contract, which has not been installed or put into operating condition.

(c) A **WARRANTY ITEM** is an item or work, installed under a contract, which the 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.

#### 3.00 FINAL INSPECTION REPORTS

Neither the Board's representatives nor the Consultant will be responsible for the issue of **extensive** lists of defects or deficiencies. The Contractor has the prime responsibility for ensuring that all items shown on the drawings and described in the specification are completed. Any inspections to approve Certificates of Substantial Performance will be immediately canceled if it becomes obvious that extensive defects or deficiencies are outstanding.

#### 4.00 OPERATING MANUALS AND REFERENCE DATA

(a) The following items are required to be provided by the Contractor, to the Consultant for review as part of the contract. As such, the provision of these items is required before the contract will be certified for Substantial Performance.

(b) Provide an electronic copy of the following:

1. List of all sub-contractors and major suppliers, their names, addresses and telephone numbers.

## CONTRACT CLOSEOUT

### SECTION 01 00 10-2

#### 4.00 OPERATING MANUALS AND REFERENCE DATA (Cont'd)

2. Date of Substantial Performance (commencement of warranty periods) and expiry dates of all warranties.
3. Approved shop drawings of all materials and equipment.
4. Statutory Declaration
5. Workplace Safety and Insurance Board Certificate of Clearance

#### 5.00 RECORD DRAWINGS

(a) The Contractor shall be required to provide to the Consultant marked-up as-built drawings at the conclusion of the project. The Consultant shall be responsible for creating and/or updating the CAD drawings and provide the following record drawings to the Board:

(b) Submit an electronic copy of the following:

- .1 PDF copy of all drawings listed on the List of Drawings
- .2 CAD files of all drawings listed on the List of Drawings
- .3 CAD files shall include:
  - . All X-Refs, objects, blocks and images bonded into the drawings
  - . Plot Style
- .4 CAD files to be saved in 2009 CAD version or earlier

(c) The record drawings will be reviewed at regular intervals by the Consultant and the quality of performance by the Contractor and Sub-Contractors in developing these records will be taken into consideration when reviewing the monthly applications for payment submitted by the Contractor.

(d) Certificate of Substantial Performance will not be issued until record drawings have been reviewed and accepted by the Consultant.

#### 6.00 RELEASE OF LIENS

Before issue of the final certificate, the Contractor is to submit evidence in writing to the Consultant, that all payments have been made which have incurred or may incur a lien.

## CONTRACT CLOSEOUT

### SECTION 01 00 10-3

#### 7.00 HOLDBACKS & PAYMENTS TO THE CONTRACTOR

(a) Holdbacks, payments and expiry of liens shall be regulated by the Construction Act and as required by the provisions of the contract documents.

(b) Following the date of Substantial Performance of the Contract and the subsequent release of the basic holdback under the Construction Act, all funds being retained for finishing work will be payable only when the Contract has been deemed to be **totally** complete and then subject to the retention of a separate finishing work holdback.

#### 8.00 INSPECTION PROCEDURES

(a) Prior to application for certification of Substantial Performance, the Contractor shall carefully inspect the work and ensure it is complete, that major and minor construction deficiencies are complete and/or corrected and the building is clean and in condition for occupancy. Notify the Consultant in writing, of satisfactory completion of the work and request an inspection.

(b) During the inspection, the Contractor shall record a list of deficiencies and defects observed by the Consultant, publish the list and distribute copies to the Consultant, Owner and Subcontractors.

(c) When the deficiencies and defects have been corrected and it appears requirements of the contract have been performed, the Contractor shall make application for certification of Substantial Performance.

#### 9.00 SUBSTANTIAL PERFORMANCE

(a) The following procedures must be complied with in order to process the Contractors application for Substantial Performance of the Contract.

(b) Prior to submitting an application for Substantial Performance, the following items **must** be provided to the Consultant, in addition to the requirements of the Construction Act:

Submitted Record Drawings for all trades

(c) The Contractor shall make a written application to the Consultant for certification of Substantial Performance, including a separate invoice for the amount of basic holdback which will be due for release and payment following the issuance of the certification of Substantial Performance. The amount of the basic holdback shall be the amount shown on the most recent regular monthly payment application, as previously certified.

(d) The Contractors application for the Declaration of Substantial Performance is **also** an application for release of basic holdback and is **separate** from applications for regular monthly payments.

## CONTRACT CLOSEOUT

### SECTION 01 00 10-4

#### 9.00 SUBSTANTIAL PERFORMANCE (Cont'd)

(e) When the Consultant certifies the Contractors application, based on a review and assessment of the status of the work, the Declaration of Substantial Performance will be issued. This establishes the date of Substantial Performance of the Contract.

(f) The Contractor must publish a copy of the Declaration and provide the Consultant with proof of the date of publication supplied by the Daily Commercial News, for forwarding to the Owner. This establishes the commencement of the 60 day period prior to the release of basic holdback.

(g) The Consultant will prepare the certificate for payment of the basic holdback only upon receipt of the following documentation from the Contractor:

- Proof of the date of publication of the Declaration of Substantial Performance
- Statutory Declaration
- Workplace Safety and Insurance Board Certificate of Clearance

The date of the certificate shall be one day after the termination of the 60 day period following the date of publication of the Declaration of Substantial Performance.

(h) The certificate for payment of the basic holdback shall be in the amount shown on the most recent regular payment application, as previously certified by the Consultant immediately prior to the issuance of the Declaration of Substantial Performance. Any applications and payments made following the date of Substantial Performance are subject to a separate holdback which will be certified for payment 60 days after Total Performance of the Contract.

(i) The certificate for payment of the basic holdback will be forwarded to the Owner with all the necessary documentation, including a copy of the invoice requesting holdback release.

(j) When the Owner has established to their satisfaction that no liens are registered against the property and that no notices of liens have been received at the end of the 60 day period, the request for release of the basic holdback will be approved for payment one day after the termination of the 60 day period.

## CONTRACT CLOSEOUT

### SECTION 01 00 10-5

#### 10.00 WARRANTY

(a) The Contractor expressly warrants and guarantees to the Owner that the Work performed by the Contractor and by all workers, suppliers and sub-contractors conforms to the requirements of the Contract Documents and is performed in a safe and careful manner.

(b) All warranties called for in the specifications and contract shall commence on the date of Substantial Performance of the work (except for portions of the work which were not completed at the time of Substantial Performance), shall indicate the expiry date and shall be sealed and countersigned by the Contractor.

(c) The conditions of warranty cover all items of work for at least 12 months and/or 1 year. On the following work noted hereunder the warranties are extended. Refer to Mechanical and Electrical Divisions for any other extended or specific warranties.

#### **2 years**

Resilient Floor Coverings  
Ceramic Floor and Wall Tile  
Painting

#### **3 years**

Caulking and Sealants  
Gypsum Board

#### **5 years**

Finishing Hardware  
Hollow Metal Doors & Frames  
Wood Doors

(d) The Contractor shall obtain from sub-contractors and provide with the final documentation, forms of warranty for all items for which warranties extend beyond the one-year period as required by the specifications.

## GENERAL CONTRACT WORK

### SECTION 01 00 50-1

#### 1.00 GENERAL

Conform to the requirements of Section 01005 General Instructions.

#### 2.00 CASH ALLOWANCE

(a) The following cash allowance shall be included in the Tender Proposal:

**TOTAL** **\$ 10,000.00**

The Cash Allowance shall cover, but is not limited to, the following items:

Door Hardware  
Removal, disposal and replacement of any designated substances  
Record Drawings

(b) The amount of the cash allowance is **exclusive** of HST and as such, payments made from the cash allowance shall not include HST. Any unspent balance of the cash allowance will be credited from the contract.

(c) Expenditures from the above cash allowance may be made only upon receipt of a Cash Allowance Authorization signed by the Consultant and payments will only be made upon submission of the invoice for the work.

(d) Cash Allowance, unless otherwise specified, covers the net cost to the Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage installation and other authorized expenses incurred in performing the Work.

(e) The Contract Price, *and not the Cash Allowance*, includes the Contractor's profit and overhead, in connection with such Cash Allowance.

(f) The Contract Price will be adjusted by written order by the Consultant to provide for an excess or deficit to each Cash Allowance. Any unused portions of these allowances shall be returned to the Owner on the conclusion of the Contract.

(g) A schedule shall be prepared by the Contractor to show when items called for under Cash Allowances, are required, so that the progress of the Work is not delayed.

(h) Expend Cash allowances as directed by Consultant in writing. Allowances will be adjusted to actual cost with no adjustment to Contractor's charges.

## GENERAL CONTRACT WORK

### SECTION 01 00 50-2

#### 3.00 **SECURITY**

(a) Provide all necessary temporary weather-tight, dust proof and insulated enclosures, doors, fastenings and keys. The Contractor shall ensure that the building is properly closed and locked at nights, Sundays, Holidays, and other occasions when the work is not in progress.

(b) The Contractor shall be entirely responsible for supervision of the project and for protection of public from vehicles in movement, for stockpiled materials and construction. Vehicular parking and stockpile materials must be maintained on the construction site. Street parking or stockpiling will not be allowed on Municipal streets.

(c) The Contractor is responsible for the prevention of vandalism and theft of all tools, equipment and materials for the duration of the Project. The Contractor must provide site security on the project to the date of Substantial Performance.

#### 4.00 **MAINTENANCE OF SIDEWALKS AND ROADS**

(a) The Contractor shall be responsible for the repair and/or replacement of all private and public sidewalks and roads, around the property, damaged by delivery trucks and construction equipment coming and going to and from the site during the course of construction.

(b) Upon completion of the work and after inspection of the sidewalks and roads by the Municipality, all broken sidewalks and roads shall be repaired and/or replaced at the discretion of the own Engineer and the cost of the work paid for by the Contractor.

(c) The Contractor shall provide the necessary curb restoration and replacement of existing concrete sidewalks at driveway entrances to Municipal standards and details, to the approval of the Town and the Consultant.

#### 5.00 **MAINTENANCE OF TRAFFIC**

(a) The Contractor shall maintain regular vehicular traffic on all streets surrounding the site at all times during the course of construction.

(b) The Contractor shall ensure that regular pedestrian or vehicular traffic on all streets surrounding the site, existing driveways and parking areas are not obstructed at anytime by construction traffic, deliveries, equipment, etc., coming and going to and from the site.

(c) The Contractor shall keep all streets surrounding the site, existing driveways and parking areas within the property, clear of mud, debris, etc., as required by the Town of Vaughan and the Consultant. The Contractor shall be responsible for any costs charged by the Town for cleaning the streets surrounding the site of construction dirt, mud or debris.

## GENERAL CONTRACT WORK

### SECTION 01 00 50-3

#### 6.00 SIGNS

No signs or advertisements, other than warning and safety signs, shall be exhibited on the site.

#### 7.00 CLEANING

(a) All final cleaning shall be carried out under this division at the completion of the work and the building shall be left in a condition to meet the approval of the Consultant prior to occupancy by the Owner.

(b) Keep all areas of the Work clean and orderly, free from accumulation of dirt, debris, garbage, oily rags, excess material, or such other trash items. Remove such items from all areas of the Work on a daily basis.

(c) Vacuum and/or broom interior building areas when ready to receive painting and other finishes. Continue cleaning on a frequent basis until the building is ready for inspection and take-over.

(d) Schedule cleaning operations so that resulting dust and other contaminants do not affect wet, newly painted surfaces, or newly installed equipment, or devices.

(e) In preparation for Substantial Performance, conduct inspections of all exposed interior and exterior surfaces.

(f) Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from all exposed interior and exterior finishes, including glass and other polished surfaces.

(g) Broom clean paved surfaces and rake clean other disturbed surfaces in the area of the Work, to remove site debris caused by the Work of this Contract. Inspect for damages and make good.

(h) Remove debris and surplus materials from the roof areas and accessible concealed spaces.

(j) All trades to keep floor clean and remove debris from work areas daily.

(k) Contractor shall source-separate, remove from site and properly dispose of all surplus and waste construction materials in a manner acceptable to the Ministry of the Environment for those materials. Burying of waste material of any kind will not be permitted on the site. Soil contaminated with paint, solvents, fuel, etc. must be excavated and removed from site and disposed of in an approved manner. Contractor shall comply with the Environmental Protection Act Regulations 102 and 103.

## GENERAL CONTRACT WORK

### SECTION 01 00 50-4

#### 8.00 TEMPORARY PROTECTION

(a) The Contractor must provide temporary barricades, screens or barriers as directed by the Consultant and/or authorized Owner Representative, for the safety of persons, or for dividing the Work from portion or portions of the building or site that may be required for use by the school, or others.

(b) Properly protect the work from any damage by the elements.

(c) During off-hours and/or stages of suspended operations for whatever reasons, the Contractor must assume all responsibility for protection against the elements, theft and/or vandalism. This applies not only to the Work in progress, but also to any materials, products, tools, equipment, or other such items left at the Work site.

(d) Properly protect floors and roofs from any damage. Take special precautions when moving heavy loads or equipment over floors and roofs.

(e) The Contractor must keep floors free of oils, grease or other such materials likely to discolour them and/or affect bonding of applied services.

(f) The Contractor must ensure that no part of the Work is loaded greater than it was designed for, when completed. Make any temporary support as strong as the permanent support. Place no load on concrete structure until it has sufficient strength to safely bear such load.

(g) Protect glass and other finishes against heat, slab and weld splatters, using appropriate protective shields and covers.

(h) The Contractor must provide and maintain, in good Working order, appropriately labeled ULC fire extinguishers, to the approval of Authorities Having Jurisdiction.

(i) The Contractor must provide a minimum of two safety helmets on site at all times for the use of the Consultant and any other Owner authorized visitors to the site. It is the Contractor's responsibility to make certain that any such visitors wear the protective headgear and any other safety gear that may be necessary at that particular time of construction.

## CONSTRUCTION FACILITIES

### SECTION 01 50 00-1

#### 1.00 GENERAL

Conform to the requirements of Section 01005 General Instructions.

#### 2.00 TEMPORARY SERVICES

(a) Temporary power required for construction use shall be allowed by the Owner from existing electrical receptacles.

(b) A continuous supply of water for construction use shall be provided by the Owner from an existing exterior hose bib.

(c) Arrange connections for temporary services with appropriate utilities, if required. Connections to existing services will be performed by the Contractor after school hours. Contractor to pay all costs for installation, use, maintenance and removal.

(d) Temporary services shall be installed in a manner approved by the Owner and Consultant and shall not pose a safety hazard to staff or students.

#### 3.00 TEMPORARY CONTAINER FOR STORAGE

Provide weatherproof storage container with ample floor area for the storage of all materials, equipment and tools which might be damaged by weather. Remove the container on completion of work and make good any damage to surfacing. **Storage space in the existing building is not available for the Contractor.**

#### 4.00 TEMPORARY SANITARY FACILITIES

At the commencement of the work, provide portable toilets of adequate size and quantity for the number of workers on the site, in accordance with Municipal and Provincial requirements. Toilets shall be kept in sanitary condition at all times and must be emptied and cleaned regularly. **Washroom facilities in the existing building shall not be used by workers.**

#### 5.00 CELLULAR PHONE/EMAIL

A cellular phone shall be provided for the Project Superintendent for use while on site. Email shall be available on site to receive written instructions, details, etc, from the Consultants.

#### 6.00 TEMPORARY OFFICE

Provide and maintain in a clean condition during the progress of the work, an adequately heated, lighted and ventilated trailer as a Contractors Office, with space for filing and layout of drawings and normal site office staff. Provide area within office for project meetings. Remove office on completion of work. No space in the existing building is available for use by the Contractor. **No smoking or vaping shall be permitted in the Contractors Office.**

## CONSTRUCTION FACILITIES

### SECTION 01 50 00-2

#### 7.00 MATERIAL STORAGE

(a) Allocate an area of the site, to the approval of the Owner and Consultant, for the storage of material brought to the job by all divisions except materials to be stored under cover. The storage area shall be kept tidy at all times and no other part of the property shall be used. No space in the existing building is available for use by the Contractor.

(b) Handle and store products in a manner to prevent damage, deterioration and soiling and in accordance with the manufacturers' instructions where applicable.

(c) Store bundled or packaged products in their original and undamaged condition with the manufacturer's seals and labels intact. Do not remove packaging until products are required in the work.

(d) Store products subject to damage from weather in weatherproof enclosures.

(e) Store cementitious materials clear of earth or concrete floors and away from walls.

(f) Store sheet materials and lumber on flat, solid supports and keep clear of ground.

(g) Store and prepare paints in a heated and ventilated room. Provide metal pans or adequate tarpaulins to protect floors in these areas.

(h) Do not store materials within 12 metres of the existing building or adjacent to operable windows in the existing building.

(i) Provide construction hoarding completely around area for material and equipment storage. Do not store materials higher than the construction hoarding when located adjacent to it.

#### 8.00 WASTE AND RECYCLING

(a) Supply bulk lift containers on the job site for the full duration of the project for the collection of all debris, rubbish, etc. Sort and separate items as required for recycling or disposal.

(b) Sort and recycle waste concrete, masonry, metal, gypsum board, wire, plastics, glass, paper and cardboard.

(c) The bulk lift containers shall be emptied from time to time when the containers are filled. Provide construction hoarding completely around bulk lift containers.

(d) Bulk lift containers shall not be located closer than 6 metres from any part of the building overnight.

(e) Waste and recyclables shall not be stockpiled on site or in the building. Adequate waste containers for each material shall be on site at all times for disposal.

## CONSTRUCTION FACILITIES

### SECTION 01 50 00-3

#### 9.00 FIRE PROTECTION

(a) The Contractor shall provide and maintain temporary fire protection equipment during performance of work required by insurance companies, authorities having jurisdiction and governing codes, regulations and bylaws.

(b) Open fires and burning of rubbish are **not permitted** on the site.

**DEMOLITION**  
**SECTION 02 41 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

(a) Selective demolition for the removal of all existing materials and equipment necessary to complete the new work of this contract.

(b) Where new ceilings are specified, it implies that the existing ceilings are to be removed. Where new floor finishes are specified, it implies that the existing floor finishes are to be removed and the areas prepped to receive the new floor finishes. No additional costs for demolition will be authorized where it can be reasonably inferred that to complete the new work, removals, cutting, etc. would be required.

(c) The Contractor shall visit the place of work prior to tender and fully inform themselves as to all existing conditions and limitations and shall include for these in the tender cost.

1.03 **PROTECTION**

The Contractor shall be responsible for the supply and installation of all necessary fencing, hoarding, scaffolding, etc., as required by the Authorities Having Jurisdiction.

1.04 **OCCUPIED BUILDING**

The Contractor shall exert and maintain extreme vigilance and caution to ensure adequate and constant protection for the building occupants that may be necessary during investigations and demolition.

1.05 **INVESTIGATIONS**

(a) Contractor shall retain the services of an inspection company to identify location of reinforcing steel, conduits, piping, etc. concealed in existing cast in place concrete slabs, columns and walls prior to removal of portions of the existing concrete or core drilling for new services.

(b) Investigations shall be performed using radar or electro-magnetic methods.

**DEMOLITION**  
**SECTION 02 41 00-2**

**PART 2 - PRODUCTS**

**2.01 DISPOSAL**

- (a) Supply bulk lift containers on the job site for the full duration of the demolition work for the collection of all debris, rubbish, etc. Sort items as required for disposal and recycling.
- (b) The bulk lift container shall be emptied from time to time when the container is filled.
- (c) Open fires and burning of rubbish are not permitted on the site.

**2.02 DUSTPROOF SCREENS**

- (a) Provide dustproof and weather-tight screens, as required to protect Owner occupied premises from demolition areas, where designated on site in consultation with the Owner and the Consultant.
- (b) Screens shall be Shield Wall Connect System as supplied by Abatement Technologies Limited.
- (c) Remove screens and make good damaged or blemished adjoining work when directed.

**PART 3 - EXECUTION**

**3.01 PROCEDURE OF WORK**

- (a) The work shall be carried on in such a manner as to cause the minimum of interference with the normal operation of the existing building. The Contractor shall consult with and obtain the approval of the Consultant and the Owner before proceeding with any work which might cause such interference.
- (b) Demolition of any portion of the existing building shall not proceed until approval is granted by the Consultant and the Owner and after weather-tight and dust-proof screens to thoroughly protect unaltered areas of the existing building and equipment, have been installed.
- (c) When approval has been granted to proceed with demolition in a particular area of the existing building, work shall be carried forth expeditiously and continuously to completion.

## DEMOLITION

### SECTION 02 41 00-3

#### 3.02 PROTECTION

(a) The Contractor shall ensure that all work in the existing building such as floors, finishes, ceilings, trim, etc. to remain, is protected as completely as possible to hold the replacing of damage in the existing building to a minimum.

(b) Material from the existing building that is specified for reuse shall be stored on site as directed by the Consultant and Owner. All materials not specified for reuse, together with all debris, rubbish, etc., shall be removed from the building and disposed of off site.

#### 3.03 DEMOLITION

(a) The Contractor shall carry out all demolition work, removal of existing materials and equipment and disposal of resultant debris where indicated on the drawings.

(b) The Owner shall be given first consideration on all existing equipment and materials required to be removed from the existing building under this contract. All materials not required by the Owner for reuse in this building, shall be disposed of by the Contractor.

(c) All equipment that is suitable for reuse but not required in this project, as determined by the Consultant and Owner, shall be turned over to the Owner.

(d) The major items of demolition and alteration in the existing buildings are listed in each of the subtrades concerned and the Contractor shall be responsible for the coordination of the entire work.

(e) The Contractor shall include the cost of cutting of all openings in portions of the existing building and openings required for the execution and completion of the work of all trades, as shown and specified. New openings for piping or ductwork through the existing exterior wall shall be core drilled from the exterior to prevent chipping of the existing exterior concrete and masonry.

(f) Remove and reinstall existing ceilings as required to complete the work of all trades including mechanical and electrical work. Refer to Mechanical and Electrical drawings. Removal and reinstallation shall include all ceiling mounted equipment and devices including light fixtures, exit signs, sprinkler heads, grilles, diffusers, ductwork, PA devices, fire alarm devices, security devices, CCTV devices, signage, etc.. Reinstallation of devices shall include verification of same to confirm proper operation of all systems.

(g) The Contractor shall provide a HEPA filter air cleaner in all work areas, operating at all times when dust is being generated in the area of work.

(h) All demolition work shall be carried out in accordance with the Occupational Health and Safety Act and Canadian Construction Safety Code.

(i) Demolition work that causes noise that impedes the operation of the existing labs in the building is to be carried out when the building is not occupied. All coring operations that penetrate the floor slab is to be carried out when the building is not occupied.

**DEMOLITION**  
**SECTION 02 41 00-4**

**3.04 MATERIAL FOR REUSE**

(a) Existing materials indicated as **reclaimed** or for **reuse** shall be carefully removed in the quantity required and cleaned so as to be suitable for reinstallation by other trades.

(b) Materials to be reclaimed for reuse include the following:

- . Existing ceiling tile in good condition
- . Existing carpet tile in good condition

(c) Refer to the Mechanical and Electrical divisions for existing equipment that is to be reused in the new work.

**3.05 MAINTENANCE OF EXISTING SYSTEMS**

(a) All building systems, including but not limited to fire alarm, security, public address, heating, ventilation and fire protection, shall remain in full operation during demolition.

(b) Where a portion of an existing system is specified for demolition, it is the Contractors responsibility to ensure that the portion of the system to remain, is a complete system and is fully operational. The Contractor shall provide all parts and equipment necessary to make the portion of the system to remain, fully operational.

(c) The Contractor shall arrange and pay for manufacturer verification of any existing system that has been modified, including but not limited to the fire alarm, public address and security systems.

**3.06 PROTECTION**

(a) Provide protection for existing materials, equipment and finishes to remain.

**UNIT MASONRY**  
**SECTION 04 20 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

The section includes unit masonry infill of openings in existing masonry walls and modification to existing masonry walls for new openings.

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent.

1.04 **DELIVERY, STORAGE AND HANDLING**

(a) All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials. All materials shall be delivered in original packages, all skids of masonry units shall be wrapped in plastic and all materials shall be stored at least 150mm above the ground. Remove factory shrink wrapping on site immediately after delivery and cover with tarpaulins to protect them from dampness and the weather.

(b) No broken blocks shall be brought to this job. No masonry units shall be supplied from stock or from another project site.

1.05 **TESTS**

(a) An inspection company, selected by the Owner, shall test all mortar and block.

(b) Tests on mortar shall conform to methods stated in CSA A179 "Mortar and Grout for Unit Masonry". Tests shall be made at the commencement of the work and at regular intervals thereafter as directed by the Architect and Building Authority having jurisdiction.

(c) Tests on block shall conform to CAN3-A165.1 "Concrete Masonry Units".

(d) The Contractor shall record the shipments of block to the site and where they are built into the work. As an alternative, blocks shipped to the site cannot be built into the work until satisfactory compressive strength test results are provided by the inspection company.

## UNIT MASONRY

### SECTION 04 20 00-2

#### 1.06 RUBBISH AND SURPLUS MATERIALS

Rubble, waste and debris shall be removed from the site daily. Immediately upon completion of this work, remove all surplus materials, equipment and rubbish caused by the work of this section, from the premises and properly clean the area where the material was stored. Burning or burying on site of bags, wrappings, etc. will not be permitted.

#### PART 2 - PRODUCTS

##### 2.01 WATER

Water used in mortar shall be clean and free from injurious amount of oil, acid, alkali, organic matter or other deleterious substances; and shall be in accordance with the appropriate requirements of CAN/CSA-A23.1 "Concrete Materials and Methods of Concrete Construction", and CAN/CSA-A23.2 "Methods of Test for Concrete".

##### 2.02 SAND AGGREGATE

Aggregate for use in mortar shall consist of fine, sharp, granular materials, conforming to CSA A82.56 "Aggregates for Masonry Mortar". Where mortar is proportioned by volume, the aggregate shall be measured in a damp, loose condition.

##### 2.03 CEMENT

Portland cement shall conform to CAN/CSA-A5-M "Portland Cement".

##### 2.04 MORTAR

(a) All mortar used in **block**, shall be Type "S" mortar having a minimum ultimate compressive strength of 8.5 MPa as determined in accordance with CSA A179, "Mortar and Grout for Unit Masonry".

(b) The following mortar proportions by volume are herein provided as a recommended guideline to achieve the strengths specified:-

Type "S" Mortar:-  
1/2 part Portland Cement  
1 part (Type "H") Masonry Cement  
4 1/2 parts sand

(c) Before proceeding with the work, tests shall be carried out the inspection company to confirm that the mortar will reach its ultimate compressive strength of 8.5 MPa for Type "S" mortar.

## UNIT MASONRY

### SECTION 04 20 00-3

#### 2.05 CONCRETE BLOCK

(a) All block shall be as manufactured by Richvale York Block Inc., Boehmers or Day and Campbell; all block, metric modular in size, 390mm long x 190mm high. All block shall be shipped to site directly from the manufacturing facility, fully wrapped in polyethylene cube bags. No blocks shall be supplied from stock or another job site. All blocks shall be supplied from one manufacturer, from a single manufacturing facility.

(b) All hollow block above grade shall conform to CAN 3 A165.1, facets H/15/DM, "Concrete Masonry Units".

(c) Provide all necessary special units such as ashlar, plain ends, halves, double bullnose ends, double bullnose face, pier blocks, sash blocks, face slabs and such other special shapes as indicated or required by the Architect.

(d) All block shall be fully cured to meet the specified design strength, before being shipped to the site. All block cubes shall be labeled in the factory with the date of manufacture.

#### 2.06 MASONRY REINFORCEMENT

(a) Masonry reinforcement shall conform to CSA A370-04 and shall be as manufactured by **Blok-Lok Limited**, Weston, Ontario or **Dur-O-Wal Ltd.**, Mississauga, Ontario. All reinforcing shall be provided by **one** manufacturer. Products listed are of one manufacturer but equivalent products of any specified manufacturer conforming to the material specification, may be utilized.

(b) All interior masonry walls shall be reinforced with Blok-Lok **Blok-Trus BL30**; materials shall be extra heavy duty 4.762mm cross rods and 4.762mm side rods, hot dip galvanized.

### PART 3 - EXECUTION

#### 3.01 LAYING MASONRY

(a) All masonry shall be carried up uniform and plumb with all horizontal joints laid true to a line.

(b) Wall reinforcement shall be placed at 400mm o/c vertically and in bed joint of top course.

(c) Coordinate with other divisions regarding the sizes of openings, chases and grooves to be left for heating, ventilating, soil or vent pipes, conduits or other metal work to be formed in the masonry where required or shown.

(d) The first course of block shall be laid with full mortar bedding. Face shell mortar bedding maybe used for all interior non-load bearing block partitions. Full mortar bedding including the cross webs shall be used for all other load bearing block work. Full head mortar joints shall be used throughout for vertical joints.

## UNIT MASONRY

### SECTION 04 20 00-4

#### 3.01 LAYING MASONRY (Cont'd)

(e) All multiple wythe masonry interior walls (block/block) shall be constructed by plastering the back face of each unit for each course with mortar of sufficient thickness to ensure complete filling of all voids. Continuous vertical joint between wythes shall be filled solid with mortar.

(f) If 50% or more of the surface area of concrete masonry units are observed to be wet, the unit is unacceptable for installation in the work.

#### 3.02 JOINTS

(a) All joints in block work shall be finished, whether or not they are concealed. Finished joints shall extend a minimum of 3 block courses above finished ceilings. Vertical and horizontal joints shall be finished with a concave tool to match existing blockwork.

(b) Ensure head joints in blocks above ceilings in fire separations are filled solid with mortar.

(c) Horizontal and vertical joints shall be a consistent 10mm width. Walls with joints widths less than 7mm and more than 13mm in any course will be rejected, removed and replaced.

#### 3.03 CUTTING OF MASONRY UNITS

(a) All masonry units shall be cut by means of a power driven mechanical water saw with dust prevention.

(b) Cut blocks must be allowed to fully dry before installation in the work.

#### 3.04 AFTER CONSTRUCTION MASONRY CLEAN-UP

(a) Carefully remove all mortar smears and dirt from masonry work using a scraper and/or wire brush. Cleaning must commence within at least 7 days from completion of masonry work.

(b) Grinding of blocks with a powered tool will not be permitted.

**CARPENTRY**  
**SECTION 06 10 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

- (a) Blocking in partitions, trim, general carpentry work, etc..
- (b) Installation of door hardware

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this division shall not commence until such defects have been corrected.

1.04 **PROTECTION OF WORK**

Provide temporary protection as is necessary to cover and protect all steps, sub-sills, door and window frames and other work from damage.

**PART 2 - PRODUCTS**

2.01 **HARDWARE**

- (a) All rough hardware shall be provided under this Section.

2.02 **LUMBER**

- (a) All lumber for framing and load-bearing lumber shall be merchantable spruce or merchantable red pine.
- (b) All lumber for "Rough Carpentry" other than framing or load bearing lumber shall be merchantable spruce or white pine No. 1 and 2 common.
- (c) All the above lumber shall conform to the official grading rules of the Canadian Lumberman's Association, Ottawa, Ontario for the particular lumber and grade.

**CARPENTRY**  
**SECTION 06 10 00-2**

**2.03 FINISH LUMBER AND PLYWOOD**

- (a) Where indicated or specified herein, finished woodwork shall be **stain grade select white birch** grade one, good two sides, free of knots, sap streaks, or other defects and thoroughly seasoned and kiln dried.
- (b) All other finished woodwork other than plywood shall be Canadian White Pine No. 1 and 2 common.
- (c) All the above lumber shall conform to the official 1979 NLGA Grading rules for Canadian Lumber.
- (d) Exterior and interior fir plywood where exposed in finished work, shall be Douglas Fir Plywood manufactured in strict accordance with CSA Specification 0121-M, and shall be edge marked with certification symbol "DFP EXTERIOR", for solid wood core plywood.
- (e) Interior birch veneer plywood for finished carpentry work shall be manufactured in strict accordance with CSA Specification 0115-M. Plywood shall be of grades as follows:-
1. Grade A-3 for plywood which is to have a natural or stained finish in exposed work.
  2. Grade 1-3 for all plywood which is to be painted.
  3. Grades A-3 and 1-3 shall be sanded on one side.
- (f) All other fir plywood shall be Douglas Fir plywood as specified above, but of grade G1S.

**PART 3 - EXECUTION**

**3.01 GROUNDING AND BLOCKING**

- (a) Provide all wood blocks, plugs and strips, required to secure the work of this and other divisions to the masonry, concrete and in steel framed partitions.
- (b) Provide and install for this and other divisions all necessary grounds where required.
- (c) Provide and set all wood blocking and strips, required to secure finished work of other divisions to other materials.

**3.02 WORKMANSHIP, ASSEMBLY AND INSTALLATION**

- (a) All finished woodwork shall be built in accordance with measurement taken on the job and in conformity with the drawings.
- (b) Work shall be assembled at the mill so far as practical and delivered ready for erection. When it is necessary to cut and fit on the job, materials shall be made with ample allowance for cutting.

**CARPENTRY**  
**SECTION 06 10 00-3**

**3.02 WORKMANSHIP, ASSEMBLY AND INSTALLATION** (Cont'd)

- (c) The construction of the finished woodwork shall take into consideration the expansion and contraction of the material.
- (d) Exposed surfaces shall be machine sanded to an even smooth surface at the mill and hand sanded to an even smooth surface ready for the finish before being fitted in place.
- (e) No end grain shall be exposed on any surface which is exposed in the finish work.
- (f) Finished work shall be erected plumb, true to a level and square.
- (g) Unless otherwise specified, finished work shall be blind nailed where possible. Surface nails where used shall be set. Work shall be securely nailed or screwed to studs, blocking or furring.
- (h) Scribing, mitring and joining shall be done accurately and neatly to conform to details.

**3.03 FINISHING HARDWARE**

- (a) Installation shall be carried out as specified in this Section, in accordance with the Hardware Schedule and manufacturer's instructions.
- (b) Obtain complete templates from hardware supplier and furnish to hollow metal door and frame suppliers, for preparation of their work to receive hardware.
- (c) Obtain manufacturers installation instructions from hardware supplier for each type of product used under this section.
- (d) All door closers and overhead stops shall be installed with through-bolts on wood and hollow metal doors.
- (e) All pull handles shall be installed with through-bolts concealed by the push plate on the opposite side of the door.
- (f) The finish hardware installer is to ensure that all locksets/latchsets/deadlocks are of the correct hand before installation to ensure that the cylinder is in the correct position. Handing is the responsibility of the hardware installer.
- (g) The finish hardware installer is to ensure that all exit devices are of the correct hand prior to installation. Handing is part of the installation procedure.
- (h) All non-sized and/or universal door closers are to be fully adjusted in strict accordance with the manufacturers installation instructions. Adjustment is inclusive of spring power, closing speed, latching speed and back-check at the time of installation.

## CARPENTRY

### SECTION 06 10 00-4

#### 3.03 **FINISHING HARDWARE** (Cont'd)

(i) All delayed action door closers are to be adjusted to 40 second delay for barrier free accessibility and/or movement of materials.

(j) The Contractor shall retain the services of a certified Architectural Hardware Consultant to inspect the hardware to verify that hardware has been supplied and installed in accordance with the specifications and the Hardware Schedule and that it is adjusted and functioning properly. The Architectural Hardware Consultant shall supervise the installation of all products supplied under this section by means of regular inspection throughout the course of construction. Allow for 2 inspections before one final inspection. A written report shall be provided to the Architect and Owner.

(k) Hardware dimensions with respect to mounting heights shall be the distance from the finish floor to the centre line of finish hardware ***unless indicated otherwise***.

. Locksets/Latchsets (centre line of lever)	1025mm
. Deadlocks	1524mm / 1200mm (BF Lavs)
. Exit Devices (centre line of push pad)	975mm
. Push Plates/Door Pulls	1100mm

(l) On doors with intermediate rails and/or designs, all hardware should be mounted on centre rail to meet architectural design considerations. Exit devices shall not be installed across glazed lites in doors. Exit devices are to be installed with minimum 50mm clearance between the end of the device and the door frame.

(m) The recommended mounting heights are to be considered a general guide unless conditions such as intermediate rails, lines of glass etc. dictate otherwise. Finish hardware mounting heights may be predetermined by the manufacturer when using mullions and/or vertical rod devices.

#### 3.04 **CLEANING**

The work area shall be swept out and all waste, dirt, rubbish, tools, etc. removed from the premises.

#### 3.05 **COMPLETION, ADJUSTMENT AND REFINISHING**

On completion of all work in the building all interior wood work and fittings shall be carefully reviewed and all necessary adjustments made to items of the work that were damaged during erection or in adjusting and refitting, shall be carefully repaired or replaced and refinished and all interior work and fittings shall be left in perfect condition.

**FIRESTOPPING**  
**SECTION 07 84 10-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

(a) Fire-stopping of service penetrations through existing fire separations including floor slabs and corridor walls.

1.03 **EXAMINATION**

Examine the work of other divisions that are to be fire-stopped under this section. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

**PART 2 - PRODUCTS**

2.01 **MATERIALS**

(a) Fire-stopping materials shall be **Fyre-sil** specialty grade construction silicone as manufactured by Tremco Ltd.. Fire-stopping materials manufactured by 3M and A/D Fire Protection Systems Inc., meeting the specified fire resistance ratings and having ULC approval and design designation, may be used.

(b) Contractor shall submit ULC designs for each fire stopping condition in the project.

**PART 3 - EXECUTION**

3.01 **APPLICATION**

(a) Fire stopping work shall include the sealing, as an effective barrier against the passage of gases, flame and smoke, all gaps around service penetrations through floors and walls in accordance with CAN4-S115 and CAN4-S101. All sealed penetrations will be tested to ensure they withhold the pressurization of the spaces. Any penetrations not withholding air pressure will be resealed.

(b) Fire-resistance rating of fire stopping material assembly must meet or exceed the fire-resistance rating of the floor or wall section being penetrated.

## FIRESTOPPING

### SECTION 07 84 10-2

#### 3.01 **APPLICATION** (Cont'd)

(c) Fyre-sil specialty grade construction silicone shall be provided at:

1. Penetrations through masonry, concrete or gypsum board fire separations, floors and walls.
2. Openings and sleeves installed for future use through fire separations.
3. Mechanical and Electrical assemblies penetrating floors and fire separations.

(d) Fire stopping around penetrations for pipes, ducts and other mechanical items requiring sound and vibration control shall be a non-rigid elastomeric seal.

(e) Damming and backup materials shall be mineral wool insulation, installed the full depth of the fire separation, less the thickness of the sealant or spray, compressed to 25% in accordance with the manufacturers recommendation and with the tested assembly being installed as acceptable to authorities having jurisdiction.

(f) Examine sizes and conditions of voids to be filled to establish correct thickness and installation of fire stopping materials. Properly clean and dry substrates and surfaces to meet manufacturer's instructions.

(g) Advise Consultant when fire stopping materials are in place and ready for review. Do not conceal or enclose fire stopping materials prior to review by Consultant and authorities having jurisdiction.

#### 3.02 **CLEANING**

(a) Adjacent materials which have been soiled shall be cleaned immediately and left in a neat, clean condition. Remove excess material and droppings using recommended cleaners as the work progresses.

(b) Clean up and remove all surplus materials, empty packages, rubbish and equipment, immediately on completion of this work.

## JOINT SEALANTS

### SECTION 07 92 00-1

#### PART 1 - GENERAL

##### 1.01 GENERAL

Conform to the requirements of Divisions 00 and 01.

##### 1.02 SECTION INCLUDES

Section includes caulking of hollow metal door frames, junctions of partitions, perimeter of lab casework countertops and splashes, etc..

##### 1.03 EXAMINATION

Examine the work of other divisions that are to be caulked under this section. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

##### 1.04 PREPARATION

(a) Clean all joints of mortar drippings, wood shavings, dirt, dust, grease and other extraneous matter.

(b) Where necessary, prime all joints using a brush that will reach all parts of the joint to be filled.

##### 1.05 WARRANTY

On completion of work, this contractor shall supply the Owner with a written warranty from the manufacturer for a minimum of **two years**. Defective work shall include, but is not limited to, joint leakage, cracking, crumbling, melting, running, loss of adhesion, loss of cohesion, staining of adjoining or adjacent work or surfaces, etc..

#### PART 2 - PRODUCTS

##### 2.01 MATERIALS

(a) Caulking compounds shall be **DYmeric** epoxidized polyurethane terpolymer sealant to CGSB CAN2-19.24 as manufactured by Tremco Ltd.

(b) Dymeric shall be **mixed to match** colour of adjacent surfaces. Provide samples of mix to Architect for approval prior to commencing work.

(c) All caulking compounds shall be of gun grade consistency.

## JOINT SEALANTS

### SECTION 07 92 00-2

#### PART 3 - EXECUTION

##### 3.01 APPLICATION

(a) **DYmeric** sealant shall be provided between:

1. Hollow metal frames and masonry and gypsum board.
2. Junction of all interior masonry walls, interior gypsum board partitions and masonry wall/gypsum board partitions.
3. Junction of masonry and gypsum board fire separations.
4. Control joints in gypsum board fire separations.

(b) All caulking shall be done by the gun method.

(c) Gun nozzles shall be of proper size to fit the joints and materials shall be applied with sufficient pressure to fill voids and joints solid and make a near smooth bead free from ridges, wrinkles, sags, air pockets and embedded impurities. Beads in corners are not to extend more than 6mm beyond the face of the frame or wall. Superficial pointing with a skin bead is not acceptable for control and expansion joints.

(d) Apply sealants only to completely dry surfaces and at air and material temperatures above minimum established by the manufacturers' product specifications.

(e) Apply sealants in interior areas only after completion of painting operations. Sealants are **not** to be painted over.

##### 3.02 CLEANING

(a) Remove dust, paint and other foreign matter from joints to be caulked and dry joint surfaces. Remove dust, silt, scale and coatings from ferrous metal surfaces to be caulked by wire brush or grinding. Remove oil, grease and other coatings from non-ferrous metal surfaces to be caulked with xylol, toluol or methylethylketone. Test a concealed area of the material to ensure cleaners will not adversely effect the specified finish.

(b) Adjacent materials which have been soiled shall be cleaned immediately and left in a neat, clean condition. Remove excess material and droppings using recommended cleaners as the work progresses. Remove any masking tape immediately after tooling of joints.

(c) Clean up and remove all surplus materials, empty packages, rubbish and equipment, immediately on completion of this work.

**METAL DOORS**  
**SECTION 08 10 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

(a) New hollow metal doors.

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

1.04 **CHECKING DIMENSIONS**

Check all dimensions concerning this work as shown on the drawings and report all discrepancies to the Consultant before commencing fabrication. Refer to Door Schedule, Hardware Schedule and Specifications for mounting heights of door hardware.

1.05 **SHOP DRAWINGS**

(a) Shop drawings shall be submitted for all items in this section, for the approval of the Consultant. Cost of all shop drawings shall be paid for under this Section.

(b) Shop drawings shall clearly indicate all materials and equipment being supplied and shall show all methods of attachment and anchorage and indicate mounting heights of all door hardware.

**PART 2 - PRODUCTS**

2.01 **HOLLOW METAL DOORS**

(a) Hollow metal doors shall be flush face type as manufactured by S.W. Fleming Co. Ltd.. Doors manufactured by Daybar Industries or Vision Hollow Metal Limited, meeting the requirements of the specification, may be used.

(b) Interior doors shall be S.W. Fleming **H18 Series**.

## METAL DOORS

### SECTION 08 10 00-2

#### PART 3 - EXECUTION

##### 3.01 DOOR FABRICATION

(a) Door facings shall be minimum 1.214mm (0.048" +/- 0.006") stretcher leveled wiped coat galvanized satin coat or colour bond sheet steel to ASTM 527 Coating Class ZF75(W25). All other metal except hardware and hinge reinforcing shall be 0.914mm hot rolled sheet steel. Hardware reinforcing shall be minimum of 2.642mm steel, ASTM A527 Coating Class ZF75(W25). Hinge reinforcing shall be 4.762mm steel plate. Hinge reinforcing shall be recessed from edge of door to suit thickness of hinges provided.

(b) Doors shall be fabricated according to the manufacturer's printed specification. Doors shall be continuously arc welded vertically where the two outer sheets are jointed and dressed smooth. Interior steel reinforcement stiffeners shall be spaced at 150mm maximum on centre and tack welded to both door faces. Door faces and edges shall be sanded, cleaned, filled and primed. Fill all surface depressions caused by tack welding. **Tack welding and filling of a lock seam door will not be permitted.**

(c) Doors shall be prepared to receive hardware. Necessary templates will be supplied by hardware supplier but doors shall be checked for hardware prior to fabrication.

(d) Radius outside corners of fixed glass stop trim framing openings for glass lites in all doors. Cut removable glass stops square with a hairline gap between vertical and horizontal pieces at corners.

(e) Provide labels issued by Underwriters Laboratories of Canada (ULC) for all doors located in fire separations indicated on the drawings.

##### 3.03 INSTALLATION

(a) Set all frames plumb, level and true. Protect frames from damage during and after installation.

(b) Check doors for correct size, hand and hardware preparation. If improperly sized, handed or prepped, return to factory for corrections. Modifications of doors on site will not be permitted.

(c) Maintain an even clearance, not exceeding 3mm between door and frame and 6mm at floor to allow free action of door, without binding.

(d) All items of hardware shall be applied during door installation.

**METAL FRAMES**  
**SECTION 08 11 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

(a) New pressed steel frames.

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

1.04 **CHECKING DIMENSIONS**

Check all dimensions concerning this work as shown on the drawings and report all discrepancies to the Consultant before commencing fabrication. Field measure existing frame to receive new door including hardware preps. Refer to Door Schedule, Hardware Schedule and Specifications for mounting heights of door hardware.

1.05 **SHOP DRAWINGS**

(a) Shop drawings shall be submitted for all items in this section, for the approval of the Consultant. Cost of all shop drawings shall be paid for under this Section.

(b) Shop drawings shall clearly indicate all materials and equipment being supplied and shall show all methods of attachment and anchorage and indicate mounting heights of all door hardware.

**PART 2 - PRODUCTS**

2.01 **PRESSED STEEL FRAMES**

(a) Pressed steel frames shall be manufactured by S.W. Fleming Co. Ltd. Frames manufactured by Daybar Industries or Vision Hollow Metal Limited, meeting the requirements of the specification, may be used.

**METAL FRAMES**  
**SECTION 08 11 00-2**

**PART 3 - EXECUTION**

**3.01 FRAME FABRICATION**

(a) Form frame members from minimum 1.549mm (0.061" +/- 0.006") wiped coat galvanized satin coat or colour bond sheet steel to ASTM A525 Coating Class ZF75(W25).

(b) Frames shall be accurately manufactured according to the manufacturer's written specification. Cut frame mitres accurately and fully weld all junctions. **Knock down frames will not be permitted.** Fill all exposed surface depressions and all butted joints resulting from fabrication of frames with metallic paste filler, uniform finish. Frames shall be assembled in position and welded. Frame profiles indicated on the drawings shall be formed from **one piece of steel**. Frame profiles that have been assembled from two or more pieces and welded or filled, will not be accepted.

(c) Frame anchors shall be concealed drywall anchors in gypsum board partitions and existing wall anchors in masonry walls.

**3.03 INSTALLATION**

(a) Set all frames plumb, level and true. Protect frames from damage during and after installation.

(b) Check frames for correct size, hand and hardware preparation. If improperly sized, handed or prepped, return to factory for corrections. Modifications of frames on site will not be permitted.

(c) Maintain an even clearance, not exceeding 3mm between door and frame and 6mm at floor to allow free action of door, without binding.

(d) All items of hardware shall be applied during door installation.

(e) Exposed fasteners for frames abutting existing surfaces (existing wall anchors) shall be filled with metallic paste filler and sanded smooth to receive paint finish.

(f) Install rubber frame bumpers, in prepared holes in frames, with adhesive to prevent removal.

## **ALUMINUM FRAMES**

### **SECTION 08 12 16-1**

#### **PART 1 - GENERAL**

##### **1.01 GENERAL**

Conform to the requirements of Divisions 00 and 01.

##### **1.02 SECTION INCLUDES**

Section includes aluminum frames PC 1.

##### **1.03 EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

##### **1.04 CHECKING DIMENSIONS**

Check all dimensions concerning this work as shown on the drawings and report all discrepancies to the Consultant before commencing fabrication.

##### **1.05 SHOP DRAWINGS**

(a) Shop drawings shall be submitted for all items in this section, for the approval of the Consultant. Cost of all shop drawings shall be paid for under this Section.

(b) Shop drawings shall clearly indicate all materials and equipment being supplied and shall show all methods of attachment and anchorage and indicate mounting heights of all door hardware.

#### **PART 2 - PRODUCTS**

##### **2.01 ALUMINUM FRAMES**

(a) Aluminum frames shall be PC350 Elite with 45mm wide trim caps as manufactured by PC350.

(b) Frame finish shall be natural anodized aluminum.

#### **PART 3 - EXECUTION**

##### **3.01 FRAME FABRICATION**

(a) Fabricate frames to suit size of door and hardware specified.

(b) Corners of 45mm wide trim to be mitered.

## **ALUMINUM FRAMES**

### **SECTION 08 12 16-2**

#### **3.02 INSTALLATION**

(a) Set all frame plumb, level and true. Protect frames from damage during and after installation.

(b) All items of hardware shall be applied during door installation.

**WOOD DOORS**  
**SECTION 08 14 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

(a) Wood doors

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Architect. The work of this section shall not commence until such defects have been corrected.

1.04 **CHECKING DIMENSIONS**

Check all dimensions concerning this work as shown on the drawings and report all discrepancies to the Architect before commencing fabrication. Refer to Door Schedule, Hardware Schedule and Specifications for mounting heights of door hardware.

1.05 **SUBMISSIONS**

(a) Shop drawings shall be submitted for all items in this section, for the review of the Architect. Cost of all shop drawings shall be paid for under this Section.

(b) Shop drawings shall clearly indicate all materials and equipment being supplied and shall show all methods of attachment and anchorage and elevations indicating location, size and kind of each door, construction, swing, label, undercut, and hardware location and machining requirements. Include location and extent of hardware blocking, fire ratings, requirement for factory finishing, glass and other pertinent data.

(c) Submit two sets of 203mm by 254 mm selected veneer samples with the clear lacquer finish, for review. Samples shall represent the color selected on veneer typical of grain patterns and coloration for the specified species and cut selected.

## WOOD DOORS

### SECTION 08 14 00-2

#### 1.06 PROJECT CONDITIONS

(a) Maintain environmental conditions including temperature, humidity, and ventilation within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits. Inspect for damage prior to installation.

(b) Environmental Limitations: Do not deliver or install wood materials until building is enclosed and weatherproof, wet Work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during remainder of construction period.

(c) Do not install wood materials that are wet, moisture damaged, or mould damaged. Indications that materials are wet or moisture damaged include discoloration, sagging, or irregular shape. Indications that materials are mould damaged include fuzzy or splotchy surface contamination and discoloration

#### PART 2 - PRODUCTS

##### 2.01 WOOD DOORS

(a) All wood doors shall be solid core AA grade flat cut White Birch veneer, with solid 22mm Birch standard edges over 25mm inner stiles and 76mm top and bottom rails, **Series 7000** doors manufactured by RK Doors, Concord, ON. Veneer grain shall be vertical.

(b) Doors manufactured by Boccam or Lambton doors, meeting the requirements of the specification, are acceptable.

(c) All doors shall be factory prepared to receive all hardware.

(d) All doors shall have a factory applied clear multi-coat finish.

#### PART 3 - EXECUTION

##### 3.01 EXAMINATION

(a) Do not begin installation until adjacent construction has been properly prepared.

(b) If adjacent construction preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

## WOOD DOORS

### SECTION 08 14 00-3

#### 3.01 **EXAMINATION** (Cont'd)

(c) Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

(d) Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mould damaged.

(e) Do not proceed with installation until substrates and materials have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces and materials using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

(f) Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of installation constitutes acceptance of conditions.

#### 3.02 **PREPARATION**

(a) Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

(b) Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

#### 3.03 **INSTALLATION**

(a) Install wood doors in accordance with manufacturer's instructions.

(b) Install wood door hardware in accordance with door and hardware manufacturer's instructions. Adjust hardware for proper door function and latching, and for smooth operation without excessive force or excessive clearance.

(c) Doors shall be fit to hang in frames with equal spacing at head and jambs and maximum 20mm gap at bottom. Bevel edges of doors to prevent binding on frames.

(d) Set glass stop fasteners below the surface and fill holes flush with filler to match colour of wood.

(e) Seal top and bottom edges of doors with clear shellac if cut on site for fitting.

**GLAZING**  
**SECTION 08 80 00-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

1.02 **SECTION INCLUDES**

- (a) Fire rated glazing in hollow metal doors and screens.
- (b) Glazing in aluminum frames.

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

**PART 2 - PRODUCTS**

2.01 **MATERIALS**

- (a) All glass shall bear manufacturer's label indicating quality and direction of draw marks. Labels to be left in place until final cleaning.
- (b) Fire rated glass in ULC rated doors shall be Premium Grade 8mm thick Fire Lite Plus fire rated ceramic glass, as distributed by Technical Glass Products.
- (c) Clear laminated glass for PC350 aluminum frames shall be 6mm thick laminated glass as manufactured by Vitro Architectural Glass or other approved manufacturer.
- (d) Glass manufactured by PPG Industries, Oldcastle and Pilkington LOF Glass, meeting the requirements of the specification, will be accepted.
- (e) Provide closed cell polyvinyl chloride (PVC) foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2% both sides of fire rated glass in doors.

**GLAZING**  
**SECTION 08 80 00-2**

**PART 3 - EXECUTION**

**3.01 FABRICATION**

- (a) Permanently label each piece of FireLite Plus with the FireLite Plus logo, UL logo and fire rating after cutting to size.
- (b) Fire rated glass to be cut to size in an approved facility. Cutting of fire rated glass to size on site is not permitted.

**3.02 GLASS INSTALLATION**

- (a) All glass shall be accurately cut to fit opening with equal bearing on entire perimeter of the pane.
- (b) Glazing tape shall be applied in strict accordance with manufacturer's directions.
- (c) Glass shall be installed in all doors using glazing tape on both sides of glass.
- (d) Install tempered glass with watermark in bottom corner.
- (e) Provide full protection from scratching and damage to fire rated glass until occupancy by the Owner.

**3.03 CLEANING**

During installation remove all corrosive or foreign materials or drippings resulting from work of this section or other trades. Provide the Contractor with instructions for the proper method and materials to be used in the final cleaning of finished surfaces.

## GYPSUM BOARD SYSTEM

### SECTION 09 20 00-1

#### **PART 1 - GENERAL**

##### 1.01 **GENERAL**

Conform to the requirements of Divisions 00 and 01.

##### 1.02 **SECTION INCLUDES**

(a) Supply and installation of lightweight steel framing, gypsum board, accessories and finishing.

##### 1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Consultant. The work of this section shall not commence until such defects have been corrected.

##### 1.04 **CHECKING DIMENSIONS**

Check all dimensions concerning this work as shown on the drawings and report all discrepancies to the Consultant before commencing fabrication.

##### 1.05 **RUBBISH**

Promptly as the work proceeds, and on completion, clean up and remove from the building site all rubbish and surplus materials that remain from any part of the foregoing work.

##### 1.06 **SHOP DRAWINGS**

(a) Shop drawings for lightweight steel framing shall be submitted for the review of the Consultant. Cost of all shop drawings shall be paid for under this section.

(b) Shop drawings shall clearly indicate the materials being supplied and shall show all joints, connections, openings, framing members, girts, clips, closures, bracing, bridging, fasteners, anchors, etc..

#### **PART 2 - PRODUCTS**

##### 2.01 **GYPSUM BOARD**

(a) Gypsum board for all lightweight steel framed walls, ceilings and bulkheads shall be fire rated 15.9mm thick ULC labeled **CGC Mold Tough** mold resistant Type X gypsum panels to ASTM C1396/C1396M.

(b) Gypsum boards manufactured by Georgia Pacific Canada or Certainteed Gypsum Canada, meeting the requirements of the specification, may be used.

## GYPSUM BOARD SYSTEM

### SECTION 09 20 00-2

#### 2.02 **FRAMING AND ACCESSORIES**

- (a) All steel framing for interior partitions, furrings and bulkheads, etc. shall be 35mm x 0.914mm (**20ga**) G90/Z275 hot dipped galvanized ASTM A446 Grade A (33ksi) steel stud framing, with 33mm x 0.914mm (**20ga**) G90/Z275 hot dipped galvanized bottom runner track, and slotted top track. Depth of all framing members is indicated on the drawings but shall not be less than 64mm for bulkheads and 92mm for partitions.
- (b) 0.508mm (25ga) D-100 zinc coated steel corner bead with 32mm wide flanges.
- (c) 0.508mm (25ga) D-4411C zinc coated steel metal casing trim for 15.9mm thick board.
- (d) Fasteners for gypsum board shall be 32mm long gypsum board screws, Type S, bugle head, for attachment to studs.
- (e) Tie wire shall be 1.219mm galvanized steel wire.
- (f) 0.914mm (20ga) D-1001 zinc coated steel gypsum board furring channels.
- (g) All metal studs and accessories shall be as manufactured by Bailey Metal Products Limited, Dass Metal Products or reviewed equivalent.
- (h) Sound attenuation batt insulation in all interior partitions shall be 400mm x 1200mm x 89mm mineral wool batts as manufactured by Roxul Inc.
- (i) Acoustic sealant shall be as manufactured by Tremco.

#### 2.03 **ACCESS PANELS**

- (a) Wall non-rated access doors with concealed hardware and 16mm gypsum board inlay for flush installation shall be Baucoplus-II 58 as manufactured by Bauco Access Panel Solutions Inc. (<http://www.accesspanelsolutions.com>)

#### 2.04 **FINISHING**

- (a) 'CGC All Purpose Joint Compound' for joints and fastener heads.
- (b) 'CGC Topping Joint Compound' for feathering finish coat.
- (c) Joint tape shall be fiber mesh tape for joints. Paper tape will not be permitted,
- (d) All gypsum board finishing products shall be as manufactured by CGC or other approved manufacturer.

## GYPSUM BOARD SYSTEM

### SECTION 09 20 00-3

#### PART 3 - EXECUTION

##### 3.01 ERECTION

(a) Gypsum board and metal framing systems shall be installed by mechanics skilled in this trade, in strict accordance with manufacturer's directions. Erection of metal framing systems shall comply with CSSBI 50M Lightweight Steel Framing Manual and CSSBI 51M Lightweight Steel Framing Design Manual. Application of gypsum board shall comply with ASTM C840-04a specification.

(b) Start securing in central portion of board and work towards the ends and edges. Hold board firmly against the framing members while installing. Perimeter screws shall not be less than 10mm nor more than 12mm from edges and ends and shall be opposite the screws on adjacent boards. Screws shall be driven with a power screw gun and set with countersunk head slightly below the surface of the board. Space screws 300mm o/c in field and 200mm o/c on edges.

(c) Casing beads are required where gypsum board butts against a surface having no trim concealing its juncture. Erect casing beads plumb and level, with minimum joints.

(d) All joints and interior angles shall have tape embedded in joint compound and three separate coats of joint compound applied over all joints, angles, fastener heads, and accessories. A thin skim coat of joint or topping compound shall be applied to the entire surface. The surface shall be smooth and free of tool marks and ridges (GA-214-90 Level 5). After application of the first coat of paint, correct any defects in the finish of the wallboard.

(e) All interior metal stud gypsum board partitions to be filled with sound attenuation batt insulation full height of wall, thickness to suit stud size, to completely fill void.

(f) Provide runner tracks for partitions at floor and at underside of roof slab or beams above. Isolate bottom runner track from floor slabs with a continuous double bead of Tremco Acoustic Sealant. Align accurately, laying out according to partition layout on drawings. Provide slotted top tracks for all interior partitions designed to accommodate structural deflection.

(g) Steel studs shall extend in one piece from bottom to top runner track. Place studs vertically, 400mm o/c maximum and not more than 50mm from abutting walls, openings and each side of corners. Screw fasten studs to both sides of bottom track. Provide freedom for deflection under load bearing members to avoid transmission of structural loads to the studs.

(h) Install continuous 38mm x 1.219mm snap in steel runner channel stiffeners through metal studs maximum 1500mm o/c vertically, minimum 2 rows per interior partition.

## **GYPSUM BOARD SYSTEM**

### **SECTION 09 20 00-4**

#### **3.01 ERECTION** (Cont'd)

(i) Anchor bottom stud runner tracks for all interior stud walls with threaded masonry anchors 400mm o/c maximum.

(j) Erect gypsum board vertically to minimize end joints. Locate end joint over supporting members. Arrange end joints to occur on different studs on opposite sides of a partition. Keep end joints away from prominent locations and central portions of ceilings. Locate vertical joints at least 300mm from the jamb lines of openings.

(k) Carry gypsum board from floor to underside of slab above. Furr out and carry gypsum board around any structural members, as may be required.

#### **3.02 PROTECTION AND CLEANING**

Protect the work of this and all other trades from damage during the progress of this work by covering all sections of work liable to damage from plastering. On completion of boarding and each successive plaster coat, clean off the floors, sweeping them thoroughly after final coat. After completion of work by other trades or when directed by the Consultant, make good all defects and thoroughly clean all plaster stains from masonry, window frames, glass or finished flooring to the approval of the Consultant.

## ACOUSTICAL CEILINGS

### SECTION 09 50 00-1

#### PART 1 - GENERAL

##### 1.01 GENERAL

Conform to the requirements of Division 00 and 01.

##### 1.02 SECTION INCLUDES

- (a) Suspended ceiling grid
- (b) Lay in acoustic ceiling tile

##### 1.03 EXAMINATION

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction or levels to the Architect. The work of this section shall not commence until such defects have been corrected.

##### 1.04 PROTECTION

Protect the work of other divisions against damage or undue soiling. Repair or replace all work so damaged or soiled.

##### 1.05 RUBBISH

Promptly as the work proceeds and on completion, clean up and remove from the building site all rubbish and surplus materials that remain from any part of the foregoing work.

##### 1.06 RESERVE CEILING TILE

This contractor shall leave **two** full factory sealed boxes of each type of ceiling tile for the Owner on completion of the work.

#### PART 2 - PRODUCTS

##### 2.01 CEILING TILE

(a) Submit samples of each component of ceiling system for approval by Architect, including all accessories.

(b) Ceiling tile shall be 609.6mm x 1219.2mm x 15.9mm Square Cut lay-in **Fine Fissured RH90** mineral acoustic ceiling tile, Item No. 1729, as manufactured by Armstrong World Industries Canada Limited, **Radar Climaplus** mineral acoustic ceiling tile, Item No. 2410, as manufactured by CGC Inc. or **Fine Fissured** mineral acoustic ceiling tile, HHF-197, as manufactured by Certainteed.

## ACOUSTICAL CEILINGS

### SECTION 09 50 00-2

#### 2.02 SUSPENSION SYSTEM

(a) Suspended t-bar grid including wall molding, shall be **Lance-Lock System 900** Exposed Tee System, as manufactured by Bailey Metal Products Limited, **Donn DX** Exposed Tee System, as manufactured by CGC Inc. or **CMC-1200** exposed tee system, as manufactured by Chicago Metallic.

(b) One piece metal outside corner wall molding fittings for square corners and radiused corners around bullnose concrete block. No mitered or butt joints will be permitted.

#### PART 3 - EXECUTION

##### 3.01 INSTALLATION

(a) Ceiling tile and metal suspension systems for same shall be applied in strict accordance with the manufacturer's instructions.

(b) Install wall mold following the masonry joints on the walls, leaving the joint exposed in all areas. Laser levels can not be used to level ceilings in areas with masonry walls.

(c) Install main T's at maximum 1219.2mm centres supported from steel joists above with 2.68mm galvanized steel wires spaced at maximum 1219.2mm centres each way and maximum 150mm from walls. **Hanger wires or hanger rods shall not be attached to the steel roof deck.**

(d) Where hanger wires cannot be installed vertically plumb to reach steel joists or other structural member, 1.626mm (16ga) x 38mm hot dip galvanized channels shall be installed, to support hanger wires, spanning between joists 1200mm o/c and secured to same with tie wire. **No hanger wires shall be installed on an angle.**

(e) Cross T's shall be positioned to form the selected grid pattern. T's shall be spaced and additional support shall be provided to accommodate ceiling lighting fixtures and duct outlets and adjacent to main runner splices.

(f) Provide hangers at all four corners of T's at each recessed light and duct outlets and at both sides of main runner splices.

(g) Light fixtures, diffusers, etc., are to be supported independently from T-bar grid system.

(h) Terminate all edges of tiles with framing members.

**RUBBER BASE**  
**SECTION 09 65 13-1**

**PART 1 - GENERAL**

1.01 **GENERAL**

Conform to the requirements of Division 00 and 01.

1.02 **SECTION INCLUDES**

(a) Supply and installation of rubber cove base.

1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction of slabs or concrete floor finish to the Architect. The work of this section shall not commence until such defects have been corrected.

1.04 **SAMPLES**

(a) Samples shall be supplied to and approved by the Architect before commencement of work. Samples shall be clearly labeled stating colour, size, gauge and the manufacturer's name.

(b) Submit three (3) samples of each colour and material to be provided.

(c) The cost of all samples shall be paid for by the Contractor, including all carrying charges.

**PART 2 - PRODUCTS**

2.01 **RUBBER COVE BASE**

(a) Rubber cove base shall be continuous roll 100mm high x 3.2m thick, colour as later selected by the Architect, conforming to CAN/CSA-A126.5 specification, manufactured by Tarkett.

(b) Adhesive shall be Ultrabond ECO 575 Premium Wall Base Adhesive as manufactured by Mapei.

## **RUBBER BASE**

### **SECTION 09 65 13-2**

#### **PART 3 - EXECUTION**

##### **3.01 WORKMANSHIP AND INSTALLATION**

(a) Prepare surfaces and install rubber cove base in accordance with the material manufacturer's printed recommendation.

(b) Base shall be installed when the temperature is 20 °C or higher. The temperature shall be maintained for a period of not less than three days before starting work and after completion of work.

(c) Apply adhesive uniformly with approved notched tooth-spreader. Apply only sufficient adhesive that can be covered before initial set takes place. Finished work shall be tightly bonded to the wall, smooth, clean and free from imperfections.

##### **3.02 RUBBER COVE BASE**

(a) Rubber cove bases, primer, and adhesive shall be applied according to the manufacturer's printed instructions.

(b) Clean out all wall bases before applying materials.

(c) Set on rubber cove bases shall be set in waterproof adhesive tight against the wall surface with lip of base on top of the floor and tightly in contact with it.

(d) Score reverse side of base to wrap around 90° corners. Base that is overscored or shows a lighter colour at the corners will not be accepted.

## RESILIENT FLOORING

### SECTION 09 65 19-1

#### **PART 1 - GENERAL**

##### 1.01 **GENERAL**

Conform to the requirements of Division 00 and 01.

##### 1.02 **SECTION INCLUDES**

(a) Supply and installation of vinyl composite floor tile (VCT).

##### 1.03 **EXAMINATION**

Examine the work of other divisions on which the work of this section is dependent. Report any defects in construction of slabs or concrete floor finish to the Architect. The work of this section shall not commence until such defects have been corrected.

##### 1.04 **SAMPLES**

(a) Samples shall be supplied to and approved by the Architect before commencement of work. Samples shall be clearly labeled stating colour, size, gauge and the manufacturer's name.

(b) Submit three (3) samples of each colour and material to be provided.

(c) If required, all materials shall be subject to test to determine if they conform to the specified requirements. Cost of all testing shall not from part of this section.

(d) The cost of all samples shall be paid for by the Contractor, including all carrying charges.

##### 1.05 **RESERVE**

Leave 2% of all resilient flooring materials of each type and colour used with the Owner for replacement purposes.

##### 1.06 **MAINTENANCE PROCEDURE**

Provide the Owner with complete directions for the proper maintenance of the floors.

## RESILIENT FLOORING

### SECTION 09 65 19-2

#### PART 2 - PRODUCTS

##### 2.01 VINYL COMPOSITE TILE (VCT)

(a) Tile shall be 304.8mm x 304.8mm x 3.2mm conforming to CSA A126.1 M 1984 and ASTM F-1066-95a Class 2, **Multicolour Standard Excelon** as manufactured by Armstrong World Industries Limited. Colour and marblizing shall extend through the thickness of the tile.

(b) Colour and pattern shall be as selected later by the Architect.

##### 2.02 ADHESIVE

(a) Adhesive shall be Ultra/Bond ECO 710 as manufactured by Mapei.

#### PART 3 - EXECUTION

##### 3.01 PREPARATION

(a) Prepare surfaces and install resilient flooring in accordance with the material manufacturer's printed recommendation.

(b) Tile shall be laid when the temperature is 20 °C or higher. The temperature shall be maintained for a period of not less than three days before starting work and after completion of work.

(c) Ensure concrete floors are dry, by using test methods recommended by flooring manufacturer, and exhibit negative alkalinity, carbonization, or dusting. Check that moisture content does not exceed manufacturer's limits for each type of flooring.

(d) Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor cementitious underlayment, recommended by flooring manufacturer.

(e) **Dry vacuum** whole area immediately prior to application of adhesive.

## RESILIENT FLOORING

### SECTION 09 65 19-3

#### 3.02 **INSTALLATION**

(a) Prime all concrete floor slabs and toppings as recommended by manufacturer of resilient flooring materials.

(a) Apply adhesive uniformly with approved notched tooth-spreader at the approximate rate of 1 litre per 2.85 square metres. Apply only sufficient adhesive that can be covered before initial set takes place. Finished work shall be tightly bonded to the floor, smooth, clean and free from imperfections

(c) All tiles shall be accurately located with an even border. Roll with 45 kg minimum weight roller.

(d) VCT shall be laid in a pattern to match the existing flooring.

(e) Tiles shall be trimmed neatly to provide a hairline joint around all pipes and other projections through the floor. Tiles shall be trimmed tight around corners of bullnose concrete block to ensure coverage with rubber base.

(f) Tiles shall be carried out under all projections.

#### 3.03 **CLEANING**

(a) A waiting period from four to seven days shall be allowed for the flooring to bond firmly. During this period the flooring shall be protected from construction traffic.

(b) Floors shall be clean of all loose dirt. Use an approved cleaner in accordance with the manufacturer's directions.

(c) Sealing and waxing shall be completed by the Owners staff.

(d) Upon completion of the work of this section, promptly remove plant equipment, surplus materials and debris resulting from the work of this Section.

## PAINTING and COATINGS

### SECTION 09 90 00-1

#### PART 1 - GENERAL

##### 1.01 GENERAL

Conform to the requirements of Divisions 00 and 01.

##### 1.02 SECTION INCLUDES

(a) Painting and coatings for all unfinished materials.

(b) Particular attention is drawn to the need to examine the specifications and drawings for the work of other divisions regarding the provisions for priming, backpainting and painting under the respective divisions and it shall be understood that all materials installed throughout the building which are required to be painted and which are left unfinished or incomplete by the other divisions, shall be completed as specified herein.

##### 1.03 STORAGE

Provision shall be made by the contractor or Consultant for a secure space for the storage of all paint materials and equipment for the exclusive use of the contractor who in turn shall maintain and leave it free from fire hazards due to improperly stored rags or solvents.

#### PART 2 - PRODUCTS

##### 2.01 MATERIALS

(a) Specification is based on using materials, quality and colours manufactured by **Dulux Paints** by PPG Architectural Coatings. Products of equal quality manufactured by Pratt and Lambert Inc. or Sherwin Williams may be used.

(b) All paint shall be delivered to the site in manufacturer's unbroken, sealed containers bearing its original label.

(c) All materials shall be applied in strict accordance with manufacturer's directions as printed on the container and any thinning required shall be done in the manner prescribed; and exclusively with the type of reducer recommended by the manufacturer.

(d) Colours for all finish coats of paint shall be selected or approved by the Consultant with duplicates supplied to the Contractor.

## PAINTING and COATINGS

### SECTION 09 90 00-2

#### 2.01 **MATERIALS** (Cont'd)

(e) The Consultant reserves the right to take representative samples of any material the painting contractor brings on the job site and have it tested by an approved laboratory to verify the materials conform to the specifications. Cost of tests, if required, shall be paid for by the Contractor.

(f) Provide two 300mm x 300mm samples of all paint colours in the finish specified for the approval of the Consultant, prior to commencing the work.

### PART 3 - EXECUTION

#### 3.01 **SURFACE PREPARATION**

(a) The painting contractor shall be held wholly responsible for the finished appearance and satisfactory completion of his work and therefore, shall not commence any painting until surfaces to be painted are in proper condition in every respect. All surfaces shall be clean and free of dirt, grease, and any foreign matter that would adversely affect the finished appearance or protection properties of the paint applied. If for any reason the surface cannot be properly prepared, the condition shall be promptly reported to the Contractor or to the Consultant, or assume the responsibility for and rectifying any unsatisfactory finish resulting.

(b) Drop cloths shall be provided to prevent paint material from falling on or marring any adjacent surface not to be painted. Any damage resulting from the neglect of this provision will be corrected at the expense of the contractor.

(c) Finishing hardware, electric plates and accessories shall be removed prior to finishing. Mask any that are not removable.

(d) Removable grilles and access panels for convectors, ventilation, walls, etc., shall be removed from location and painted. Replace when painting is completed and ensure proper operation of movable parts after finishing.

#### 3.02 **WORKMANSHIP AND GENERAL REQUIREMENTS**

(a) All materials shall be applied and cut in neatly so as to dry uniformly to the colour and sheen specified, free from runs, sags, wrinkles, shiners, streaks, and brush marks.

(b) During the actual application and drying of the paint and until normal occupancy of the building occurs a minimum temperature of 15 degrees C shall be maintained. This temperature shall be held as constant as possible to prevent condensation. Adequate ventilation shall be provided at all times so that the humidity cannot rise, above the dew point at the coldest wall. The contractor is solely responsible for maintaining required temperatures, ventilation, and room condition.

## PAINTING and COATINGS

### SECTION 09 90 00-3

#### 3.02 WORKMANSHIP AND GENERAL REQUIREMENTS (Cont'd)

- (c) Enamel and varnish undercoats shall be sanded smooth prior to re-coating.
- (d) All doors and frames shall have same finish and number of coats of both interior and exterior sides.
- (e) Safe levels for painting shall be determined by use of an electronic moisture meter.
- (f) The areas in which the contractor has been conducting his work shall be left in a clean and orderly condition, with all paint spots, rags, and discarded equipment removed.
- (g) All coats of paint shall be thoroughly dry before applying succeeding coats. All primer and intermediate coats of paint shall be sanded lightly and dusted before succeeding coats of paint are applied. All finished surfaces blemished with dust particles shall be sanded smooth and refinished.
- (h) Where damage to or patching of any kind occurs on any newly finished surface, the entire plane shall be refinished terminating only at a definite break or change in direction of the plane surface. No spot touch-ups will be permitted.
- (i) Any work which does not meet the approval of the Consultant shall be immediately corrected.
- (j) Paint shall be applied so that one inch strip of the proceeding coat is discernible at the base of walls.
- (k) Paint manufacturer's representative shall visit the site periodically to ensure conditions and paint applications are proper.
- (l) No paint or finishing to be done in any area unless area is **broom clean**.
- (m) All surfaces, with the exception of walls, shall be tipped with a brush if a roller has been used to apply the finish. Roller marks will not be accepted on doors, frames, etc..
- (n) Mechanical contractor shall provide assistance in identifying all piping requiring color coding in addition to gas and fire protection piping.
- (o) Paint all exposed pipes, ductwork, conduit and insulation covering.

## **PAINTING and COATINGS**

### **SECTION 09 90 00-4**

#### **3.03 INTERIOR METAL WORK**

Hollow metal doors and frames, exposed conduit, etc..

All metal work must be solvent wiped cleaned prior to priming.

One coat Dulux X-Pert Gripper Primer/ Sealer 60000

Two coats Dulux Lifemaster 59211 Interior Acrylic Semi-Gloss (Zero VOC).

#### **3.04 INTERIOR GYPSUM BOARD**

One coat Dulux X-Pert Gripper Primer/ Sealer 60000

Two coats Pitt-Tech Plus 90-1110 Series Acrylic Satin Enamel

All walls shall be painted full height prior to the installation of wall mould, etc.

#### **3.05 INTERIOR BLOCK WALLS**

Multiple coats of Dulux X-pert Acrylic Block Filler 36250 to completely fill all voids, leaving no pinholes in face of concrete blocks. Build up finish on new blocks to match existing.

Two coats Pitt-Tech Plus 90-1210 Series Acrylic Semi-Gloss Enamel.

## **PAINTING and COATINGS**

### **SECTION 09 90 00-5**

#### **3.06 SURFACE PREPARATION OF EXISTING**

(a) The Contractor shall be held wholly responsible for the finish appearance and satisfactory completion of his work and shall not commence any painting until the existing surfaces to be painted are in proper condition in every respect. All surfaces shall be clean and free from dirt, grease, loose scaling or blistering paint and any foreign matter that would adversely affect the finished appearance or protection properties of the paint applied.

(b) Previously painted surfaces with hard glossy finish must be deadened by sandpaper to ensure adhesion.

(c) All previously painted surfaces which are partially removed by blistering, peeling, rupture, or scratching, are to be sanded to feather edges flush with substrate and spot primed with the primer recommended for new surfaces.

(d) Where existing objects and materials are removed from existing painted walls, remove any paint 'ridge' that may result, flush with existing wall surface.

(e) Paint both sides of existing doors and frames opening into area of new construction or areas that are being altered and/or renovated and/or re-painted.

#### **3.07 EXISTING INTERIOR WALLS**

Spot prime as required with one coat of Dulux X-pert Acrylic Block Filler 36250. Completely fill surface to match texture of adjacent finish with primer.

Prime entire walls with Devoe Devran 205 Universal Epoxy Primer.

Two coats Pitt-Tech Plus 90-1210 Series Acrylic Semi-Gloss Enamel.

#### **3.08 EXISTING INTERIOR METALWORK**

Hollow metal doors, hollow metal door frames, etc.

Wash existing surfaces with Trisodium Phosphate (TSP) solution (1/2 lb. to a gallon of water). Rinse thoroughly with clean water and allow to dry.

Spot prime as required with one coat Dulux X-Pert Gripper Primer/ Sealer 60000.  
Two coats Dulux Lifemaster 59211 Interior Acrylic Semi-Gloss (Zero VOC).