

PWGSC Ontario	SPECIFICATION	Section 00 00 00
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Number R.075435.001		2015-08-13

PROJECT TITLE      Building 1 Replace Windows

PROJECT NUMBER      R.075435.001

PROJECT DATE      2015-08-13, Issued for Tender

END OF SECTION

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## PART 1 - GENERAL

### 1.1 PRECEDENCE

- .1 For Federal Government projects, Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises removal of existing and installation of new aluminum windows in Building 1, located at Joyceville Institution, Joyceville, Ontario; and further identified as "Building 1 Replace Windows" PWGSC Project Number R.075435.001.

### 1.3 CONTRACT METHOD

- .1 Construct work under single, stipulated price contract.
- .2 Relations and responsibilities between Contractor and subcontractors and suppliers assigned by Owner are as defined in Conditions of Contract. Assigned Subcontractors must, in addition:
  - .1 Furnish to Contractor, bonds covering faithful performance of subcontracted work and payment of obligations thereunder when Contractor is required to furnish such bonds to Departmental Representative.
  - .2 Purchase and maintain liability insurance to protect Contractor from claims for not less than limits of liability which Contractor is required to provide to Departmental Representative.

### 1.4 COST BREAKDOWN

- .1 Within 48 hours of notification of acceptance of bid furnish a cost breakdown by Section aggregating contract amount.
  - .1 For Section 02 85 00.01 and 02 83 10 submit prices for each line item for the unit of measure specified.
- .2 Show separately cost of equipment purchased exempt from Ontario Retail Sales Tax under your Ontario Sales Tax licence number.
- .3 Within 48 hours of acceptance of bid submit a list of subcontractors.

### 1.5 WORK SEQUENCE

- .1 Construct Work in stages to accommodate continued use of premises during construction.
- .2 Develop window removal and reinstallation sequence schedule in coordination with Departmental Representative and Director.
- .3 Coordinate Progress Schedule with Departmental Representative and with building occupancy during construction.

- .4 Remove maximum 4 windows per day. Remove only such number of existing windows at a time, that can be replaced by installation of new units on the same work day. If removed windows can not be replaced on same work day secure openings with minimum 5/8" plywood fastened to building structure, and install temporary thermal and moisture barrier in accordance with Section 01 56 00. Begin installation of new windows on the following work day at plywood secured openings.
- .5 Maintain fire access/control.

#### 1.6 CONTRACTOR USE OF PREMISES

- .1 Contractor has restricted use of site construction. Use of areas on Institution property, for Work, storage, and access to the construction site will be controlled, as directed by the Departmental Representative.
- .2 Coordinate use of premises under direction of Departmental Representative.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

#### 1.7 INSTITUTION OCCUPANCY

- .1 Premises will be occupied during entire construction period for execution of normal operations.
- .2 Cooperate with Departmental Representative and Director in scheduling operations to minimize conflict and to facilitate usage.

#### 1.8 ALTERATIONS TO EXISTING BUILDING

- .1 Remove and recycle, sell material for reuse or dispose of:
  - .1 Removed existing windows.

### PART 2 - PRODUCTS

#### 2.1 NOT USED

- .1 Not used.

### PART 3 - EXECUTION

#### 3.1 NOT USED

- .1 Not used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- .2 Maintain existing services to building and provide for personnel and vehicle access.
- .3 Where security is reduced by work provide temporary means to maintain security.
- .4 Departmental Representative will assign sanitary facilities for use by Contractor's personnel. Keep facilities clean.
- .5 Closures: protect work temporarily until permanent enclosures are completed.

### 1.2 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Execute work with least possible interference or disturbance to building operations and occupants, and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

### 1.3 SPECIAL REQUIREMENTS

- .1 Submit schedule in accordance with Section 01 32 16.07 - Construction Progress Schedule - Bar (GANTT) Chart.
- .2 Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
- .3 Keep within limits of work and avenues of ingress and egress.
- .4 For additional special requirements including work hours and vehicular access hours refer to Section 01 35 13.

### 1.4 SECURITY

- .1 For Security Requirements and Procedures refer to Section 01 35 13.

### 1.5 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions. Smoking is not permitted.

## PART 2 - PRODUCTS

### 2.1 NOT USED

.1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

.1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 RELATED REQUIREMENTS

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.

### 1.2 APPOINTMENT AND PAYMENT

- .1 Departmental Representative will appoint and pay for services of testing laboratory except follows:
  - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .2 Inspection and testing performed exclusively for Contractor's convenience.
  - .3 Mill tests and certificates of compliance.
  - .4 Tests specified to be carried out by Contractor under supervision of Departmental Representative.
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected work.

### 1.3 CONTRACTOR'S RESPONSIBILITIES

- .1 Provide labour, equipment and facilities to:
  - .1 Provide access to Work for inspection and testing.
  - .2 Facilitate inspections and tests.
  - .3 Make good Work disturbed by inspection and test.
- .2 Notify Departmental Representative 48 hours minimum sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

## PART 2 - PRODUCTS

### 2.1 NOT USED

.1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

.1 Not Used.

END OF SECTION



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## PART 1 - GENERAL

### 1.1 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

### 1.2 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.

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- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Certificate of Substantial Performance and Certificate of Completion as defined times of completion are of essence of this contract.

### 1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.
- .2 Submit to Departmental Representative within 5 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within 5 working days of receipt of acceptance of Master Plan.

### 1.4 PROJECT MILESTONES

- .1 Project milestones form interim targets for Project Schedule.
  - .1 Hazardous materials and designated substances abatement completed.
  - .2 Replacement of windows completed.
  - .3 Interior cutting, patching, and finishing completed.
  - .4 Certificate of Substantial Performance.

### 1.5 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Departmental Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 5 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

### 1.6 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
  - .1 Award.
  - .2 Shop Drawings, Samples.
  - .3 Permits.
  - .4 Mobilization.
  - .5 Hazardous Materials, Designated Substances.
  - .6 Window Replacement.
  - .7 Cutting and Patching, Finishing.
  - .8 Inspection and Testing.

### 1.7 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.

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- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

## 1.8 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular site meetings specified in Section 01 31 19, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.
- .2 Weather related delays with their remedial measures will be discussed and negotiated.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not used.

## PART 3 - EXECUTION

### 3.1 NOT USED

- .1 Not used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 ADMINISTRATIVE

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10 Keep one reviewed copy of each submission on site.
- .11 Submit number of hard copies specified for each type and format of submittal and also submit in electronic format as pdf files. Forward pdf, MS Word, and Autocad dwg files on USB compatible with PWGSC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

### 1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Indicate materials, methods of construction and attachment or 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 co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

- .3 Allow 5 working days for Departmental Representative's review of each submission.
- .4 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Amount. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .5 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .6 Accompany submissions with transmittal letter, in duplicate, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .7 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Details of appropriate portions of Work as applicable:
    - .1 Fabrication.
    - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .3 Setting or erection details.
    - .4 Performance characteristics.
    - .5 Standards.
    - .6 Relationship to adjacent work.
- .8 After Departmental Representative's review, distribute copies.
- .9 Submit three hard copies and one electronic copy of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .10 Submit three hard copies and one electronic copy of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.

- .2 Testing must have been within 3 years of date of contract award for project.
- .11 Submit three hard copies and one electronic copy of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
  - .2 Certificates must be dated after award of project contract complete with project name.
- .12 Submit three hard copies and one electronic copy of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative.
  - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .13 Submit three hard copies and one electronic copy of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .14 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .15 Submit three hard copies and one electronic copy of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .16 Delete information not applicable to project.
- .17 Supplement standard information to provide details applicable to project.
- .18 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .19 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
  - .1 This review shall not mean that PWGSC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
  - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

### 1.3 SAMPLES

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Amount. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

### 1.4 MOCK-UPS

- .1 Erect mock-ups in accordance with Section 01 45 00.

### 1.5 PHOTOGRAPHIC DOCUMENTATION

- .1 Submit electronic and hard copy of colour digital photography in jpg format, standard resolution bi-weekly with progress statement and as directed by Departmental Representative.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints:
  - .1 Viewpoints and their location as determined by Departmental Representative.
- .4 Frequency of photographic documentation: as directed by Departmental Representative.

### 1.6 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Safety and Insurance Board Experience Report.

### 1.7 FEES, PERMITS AND CERTIFICATES

- .1 Provide authorities having jurisdiction with information requested.
- .2 Pay fees and obtain certificates and permits required.
- .3 Furnish certificates and permits.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION



## PART 1 - GENERAL

### 1.1 PURPOSE

- .1 To ensure that both the construction project and the institutional operations may proceed without undue disruption or hindrance and that the security of the Institution is maintained at all times.

### 1.2 DEFINITIONS

- .1 "Contraband" means:
  - .1 An intoxicant, including alcoholic beverages, drugs and narcotics.
  - .2 Tobacco or associated tobacco products.
  - .3 An igniting device, lighter or matches.
  - .4 A weapon or a component thereof, ammunition for a weapon, and anything that is designed to kill, injure or disable a person or that is altered so as to be capable of killing, injuring or disabling a person, when possessed without prior authorization.
  - .5 An explosive or a bomb or a component thereof.
  - .6 Currency over any applicable prescribed limit, \$25 when possessed by an inmate, visitor or contractor without prior authorization.
  - .7 Any item not described in paragraphs 1.2.1.1 to 1.2.1.6 that could jeopardize the security of a Penitentiary or the safety of persons, when that item is possessed without prior authorization.
- .2 "Unauthorized Smoking and related Items" means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing tobacco, cigarette making machines, matches and lighters.
- .3 "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the construction project.
- .4 "CSC" means Correctional Service Canada.
- .5 "Director" means Director, Warden or Superintendent of the Institution as applicable.
- .6 "Construction Employees" means persons working for the General Contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.
- .7 "Departmental Representative" means the project manager from Public Works and Government Services Canada.
- .8 "Perimeter" means the fenced or walled area of the Institution that restrains the movement of the inmates.

- .9 "Construction Limits" means the area as shown on the contract drawings that the Contractor will be allowed to work. This area may or may not be isolated from the security area of the Institution.

### 1.3 PRELIMINARY PROCEEDINGS

- .1 Prior to the commencement of work, the Contractor shall meet with the Director or his/her representative to:
  - .1 Discuss the nature and extent of all activities involved in the Project.
  - .2 Establish mutually acceptable security procedures in accordance with this instruction and the institution's particular requirements.
- .2 Contractor shall:
  - .1 Ensure that all Construction Employees are aware of the security requirements.
  - .2 Ensure that a copy of the security requirements is always prominently on display at the job site.
  - .3 Co-operate with institutional personnel in ensuring that security requirements are observed by all Construction Employees.

### 1.4 CONSTRUCTION EMPLOYEES

- .1 Submit to the Director a list of the names with date of birth of all Construction Employees to be employed on the construction site and a security clearance form for each employee.
- .2 Submit a copy of photo ID with CPIC clearance form for each employee. Allow two (2) weeks for processing of security clearances. Employees will not be admitted to the Institution without a valid security clearance in place and a recent picture identification such as a provincial driver's license. Security clearances obtained from other CSC Institutions are not valid at this Institution.
- .3 The Director may require that facial photographs may be taken of Construction Employees and these photographs may be displayed at appropriate locations in the Institution or in an electronic database for identification purposes. The Director may require that Photo ID cards be provided for all Construction Employees. ID cards will then be left at the designated entrance to be picked upon arrival at the institution and shall be displayed prominently on the Construction Employees' clothing at all time while Construction Employees are in the institution.
- .4 Entry to Institutional Property will be refused to any person there may be reason to believe may be a security risk.
- .5 Any person employed on the construction site will be subject to immediate removal from Institutional Property if they:
  - .1 Appear to be under the influence of alcohol, drugs or narcotics.
  - .2 Behave in an unusual or disorderly manner.

- .3 Are in possession of contraband.
- .6 Smoking is prohibited anywhere on CSC property.

#### 1.5 VEHICLES

- .1 All unattended vehicles on CSC property shall have windows closed; doors and trunks shall be locked and keys removed. The keys shall be securely in the possession of the owner or an employee of the company that owns the vehicle.
- .2 Gas caps on all vehicles and motorized equipment shall be lockable.
- .3 The Director may limit at any time the number and type of vehicles allowed within the Institution.
- .4 Drivers of delivery vehicles for material required by the project will not require security clearances but must remain with their vehicle the entire time that the vehicle is in the Institution. The Director will require that these vehicles be escorted by Institutional Staff or Commissionaires while in the Institution.
- .5 If the Director permits trailers to be left inside the secure perimeter of the Institution, these trailer doors will be locked at all times. All windows will be securely locked when left unoccupied. All trailer windows shall be covered with expanded metal mesh. All storage trailers inside and outside the perimeter shall be locked when not in use.

#### 1.6 PARKING

- .1 Parking area(s) to be used by Construction Employees will be designated by the Director. Parking in other locations will be prohibited and vehicles may be subject to removal.

#### 1.7 SHIPMENTS

- .1 All shipments of project material, equipment and tools shall be addressed in the Contractor's name to avoid confusion with the Institution's own shipments. The Contractor must have his/her own employees on site to receive any deliveries or shipments. CSC staff will NOT accept receipt of deliveries or shipments of any material, equipment or tools.

#### 1.8 TELEPHONES

- .1 There will be no installation of telephones, Facsimile machines and computers with Internet connections permitted within the perimeter of the Institution unless prior approval of the Director is received.
- .2 The Director will ensure that approved telephones, facsimile machine and computers with internet connections are located where they are not accessible to inmates. All computers will have an approved password protection that will stop an internet connection to unauthorized

personnel.

- .3 Wireless cellular and digital telephones, including but not limited to devices for telephone messaging, pagers, BlackBerries, telephone used as 2-way radios, are not permitted within the Institution unless approved by the Director. If wireless cellular telephones are permitted, the user will not permit their use by any inmate.
- .4 The Director may approve but limit the use of two way radios.

#### 1.9 WORK HOURS

- .1 Work hours within the Institution are: Monday to Friday, 08:00 hrs to 16:00 hrs.
- .2 Work will not be permitted during weekends and statutory holidays without the permission of the Director. A minimum of seven (7) days advance notice will be required to obtain the required permission. In case of emergencies or other special circumstances, this advance notice may be waived by the Director.

#### 1.10 OVERTIME WORK

- .1 No overtime work will be allowed without permission of the Director. Give a minimum forty-eight (48) hours advance notice when overtime work on the construction project is necessary and approved. If overtime work is required because of an emergency such as work to make the construction safe and secure, the Contractor shall advise the Director as soon as this condition is known and follow the directions given by the Director. Costs to the Crown for such events may be attributed to the Contractor.
- .2 When overtime work, weekend, or statutory holiday work is required and approved by the Director, extra staff members may be posted by the Director or his/her designate, to maintain the security surveillance. The Departmental Representative may post extra staff for inspection of construction activities. The actual cost of this extra staff may be subject to reclamation by the Crown.

#### 1.11 TOOLS AND EQUIPMENT

- .1 Maintain a complete list of all tools and equipment to be used during the construction project. Make this inventory available for inspection when required.
- .2 Throughout the construction project maintain up-to-date the list of tools and equipment specified above.
- .3 Keep all tools and equipment under constant supervision, particularly power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders and any sort of jacking device.

- .4 Store all tools and equipment in approved secure locations.
- .5 Lock all tool boxes when not in use. Keys to remain in the possession of the employees of the Contractor. Scaffolding shall be secured and locked when not erected and when erected, will be secured in a manner agreed upon with the Institutional designate.
- .6 All missing or lost tools or equipment shall be reported immediately to the Director.
- .7 The Director will ensure that the security staff members carry out checks of the Contractor's tools and equipment against the list provided by the Contractor. These checks may be carried out at the following intervals:
  - .1 At the beginning and conclusion of every construction project.
  - .2 Weekly, when the construction project extends longer than a one week period.
  - .3 The Contractor may be subject to random checks by security staff to ensure proper storage and security of tools throughout the project.
- .8 Certain tools/equipment such as cartridges and hacksaw blades are highly controlled items. The Contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the Director's representative at the end of each day.
- .9 If propane or natural gas is used for heating the construction, the Institution will require that an employee of the Contractor supervise the construction site during non-working hours.
- .10 If torches or grinders are required tools to perform Work, Contractor must complete a Hot Work Permit as supplied by CSC. Completed original form(s) are copied and posted on the work site in a conspicuous location. Original documents are to remain with the Institutional Fire Chief.

#### 1.12 PRESCRIPTION DRUGS

- .1 Employees of the Contractor who are required to take prescription drugs during the workday shall obtain approval of the Director to bring a one day supply only into the Institution.

#### 1.13 SMOKING RESTRICTIONS

- .1 Contractors and construction employees are not permitted to smoke inside correctional facilities or outdoors within the perimeter of a correctional facility and must not possess unauthorized smoking items within the perimeter of a correctional facility.
- .2 Contractors and construction employees who are in violation of this policy will be requested to immediately cease smoking or dispose of any unauthorized smoking items and, if they persist, will be directed

to leave the institution.

- .3 Smoking is only permitted outside the perimeter of a correctional facility in an area to be designated by the Director.

#### 1.14 CONTRABAND

- .1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on Institutional Property.
- .2 Discovery of Contraband on the construction site and the identification of the person(s) responsible for the Contraband shall be reported immediately to the Director.
- .3 Contractors shall be vigilant with both their staff and the staff of their sub-contractors and suppliers that the discovery of Contraband may result in cancellation of the security clearance of the affected employee. Serious infractions may result in the removal of the company from the Institution for the duration of the construction.
- .4 Presence of arms and ammunition in vehicles of Contractors, sub-contractors and suppliers or employees of these will result in the immediate cancellation of security clearances for the driver of the vehicle.

#### 1.15 SEARCHES

- .1 All vehicles and persons entering Institutional property may be subject to search.
- .2 When the Director suspects, on reasonable grounds, that an employee of the Contractor is in possession of Contraband or unauthorized items, he/she may order that person to be searched.
- .3 All employees entering the Institution may be subject to screening of personal effects for traces of Contraband drug residue.

#### 1.16 ACCESS TO AND REMOVAL FROM INSTITUTION PROPERTY

- .1 Construction personnel and commercial vehicles will not be admitted to the Institution after normal working hours, unless approved by the Director.

#### 1.17 MOVEMENT OF VEHICLES

- .1 Escorted commercial vehicles will be allowed to enter or leave the Institution through the vehicle access gate during the following hours:
  - .1 08:00 hrs to 11:00 hrs.
  - .2 13:00 hrs to 16:00 hrs.
- .2 Construction vehicles shall not leave the Institution until an inmate count is completed.

- .3 The Contractor shall advise the Director twenty four (24) hours in advance to the arrival on the site of heavy equipment such as concrete trucks, cranes, etc.
- .4 Vehicles being loaded with soil or other debris, or any vehicle considered impossible to search, must be under continuous supervision by CSC Staff or Commissionaires working under the authority of the Director.
- .5 Commercial Vehicles will only be allowed access to Institutional Property when their contents are certified by the Contractor or his/her representative as being strictly necessary to the execution of the construction project.
- .6 Vehicles shall be refused access to Institutional Property if, in the opinion of the Director, they contain any article which may jeopardize the security of the Institution.
- .7 Private vehicles of Construction Employees will not be allowed within the security wall or fence of medium or maximum security Institutions without the permission of the Director.
- .8 With prior approval of the Director, a vehicle may be used in the morning and evening to transport a group of employees to the work site. This vehicle will not remain within the Institution the remainder of the day.
- .9 With the approval of the Director, certain equipment may be permitted to remain on the construction site overnight or over the weekend. This equipment must be securely locked, with the battery removed. The Director may require that the equipment be secured with a chain and padlock to another solid object.

#### 1.18 MOVEMENT OF CONSTRUCTION EMPLOYEES ON INSTITUTIONAL PROPERTY

- .1 Subject to the requirements of good security, the Director will permit the Contractor and his/her employees as much freedom of action and movement as is possible.
- .2 However, notwithstanding paragraph above, the Director may:
  - .1 Prohibit or restrict access to any part of the Institution.
  - .2 Require that in certain areas of the Institution, either during the entire construction project or at certain intervals, Construction Employees only be allowed access when accompanied by a member of the CSC security staff.
- .3 During the lunch and coffee/health breaks, all employees will remain within the construction site. Employees are not permitted to eat in the officer's lounge and dining room.

#### 1.19 SURVEILLANCE AND INSPECTION

- .1 Construction activities and all related movement of personnel and vehicles will be subject to surveillance and inspection by CSC security staff members to ensure that established security requirements are met.
- .2 CSC staff members will ensure that an understanding of the need to carry out surveillance and inspections, as specified above, is established among Construction Employees and maintained throughout the construction project.

#### 1.20 STOPPAGE OF WORK

- .1 The Director may request at any time that the Contractor, his/her employees, sub-contractors and their employees not enter or leave the work site immediately due to a security situation occurring within the Institution. The Contractor's site supervisor shall note the name of the staff member making the request and the time of the request and obey the order as quickly as possible.
- .2 The Contractor shall advise the Departmental Representative within 24 hours of this delay to the progress of the work.

#### 1.21 CONTACT WITH INMATES

- .1 Unless specifically authorized, it is forbidden to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any employee doing any of the above will be removed from the site and his/her security clearance revoked.
- .2 It is forbidden to take pictures of inmates, of CSC staff members or of any part of the Institution other than those required as part of this Contract.

#### 1.22 COMPLETION OF CONSTRUCTION PROJECT

- .1 Upon completion of the construction project or, when applicable, the takeover of a facility, the Contractor shall remove all remaining construction material, tools and equipment that are not specified to remain in the Institution as part of the construction contract.

### PART 2 - PRODUCTS

#### 2.1 NOT USED

- .1 Not used.



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### PART 3 - EXECUTION

#### 3.1 NOT USED

.1 Not used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 Canadian Standards Association (CSA): Canada
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .2 National Building Code 2010 (NBC):
  - .1 NBC 2010, Division B, Part 8 Safety Measures at Construction and Demolition Sites.
- .3 National Fire Code 2010 (NFC):
  - .1 NFC 2010, Division B, Part 5 Hazardous Processes and Operations, subsection 5.6.1.3 Fire Safety Plan.
- .4 Province of Ontario:
  - .1 Occupational Health and Safety Act Revised Statutes of Ontario 1990, Chapter O.1 as amended, and Regulations for Construction Projects, O. Reg. 213/91 as amended.
  - .2 O. Reg. 490/09, Designated Substances.
  - .3 Workplace Safety and Insurance Act, 1997.
  - .4 Municipal statutes and authorities.
  - .5 Occupational Health and Safety Branch, Ministry of Labour, Guideline - Silica on Construction Projects, April 2011,
- .5 Treasury Board of Canada Secretariat (TBS):
  - .1 Treasury Board, Fire Protection Standard April 1, 2010  
[www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316&section=text](http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316&section=text).
- .6 Section 02 82 00.02 - Asbestos Abatement - Minimal Precautions.
- .7 Section 02 83 10 - Lead-Base Paint Abatement - Type 1 (Minimum) Precautions.
- .8 Final Report, Designated Substance and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada - WESA Group Inc., March 2012, as attached at the end of specifications.

### 1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1 Results of site specific safety hazard assessment.
  - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
  - .3 Measures and controls to be implemented to address identified safety hazards and risks.

- .3 Provide a Fire Safety Plan, specific to the work location, in accordance with NBC, Division B, Article 8.1.1.3 prior to commencement of work. The plan shall be coordinated with, and integrated into, the existing Facility Emergency Procedures and Evacuation Plan in place at the site. Departmental Representative will provide Facility Emergency Procedures and Evacuation Plan. Deliver two copies of the Fire Safety Plan to the Departmental Representative not later than 14 days before commencing work.
- .4 Contractor's and Sub-contractors' Safety Communication Plan.
- .5 Contingency and Emergency Response Plan addressing standard operating procedures specific to the project site to be implemented during emergency situations. Coordinate plan with existing Facility Emergency Response requirements and procedures provided by Departmental Representative.
- .6 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 3 days after receipt of comments from Departmental Representative.
- .7 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .8 Submit names of personnel and alternates responsible for site safety and health.
- .9 Submit records of Contractor's Health and Safety meetings when requested.
- .10 Submit 4 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative weekly.
- .11 Submit 4 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative, weekly.
- .12 Submit copies of orders, directions or reports issued by health and safety inspectors of the authorities having jurisdiction.
- .13 Submit copies of incident and accident reports.
- .14 Submit Material Safety Data Sheets (MSDS).
- .15 Submit Workplace Safety and Insurance Board (WSIB) – Experience Rating Report.

### 1.3 FILING OF NOTICE

- .1 File Notice of Project with Provincial authorities prior to commencement of Work.

### 1.4 WORK PERMIT

- .1 Obtain building permits related to project prior to commencement of Work.
- .2 Obtain Hot Work Permit from Works Department.

### 1.5 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

### 1.6 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.

### 1.7 REGULATORY REQUIREMENTS

- .1 Comply with the Acts and regulations of the Province of Ontario.
- .2 Comply with specified standards and regulations to ensure safe operations at site.

### 1.8 PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
  - .1 Silica in concrete, ceramic tile.
  - .2 Asbestos in window caulking.
  - .3 Lead in paint.
- .2 Refer to DSHMS Report attached at the end of Specifications, and Sections 02 82 00.02 and 02 83 10.

### 1.9 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns either accepting or requesting improvements.
- .3 Relief from or substitution for any portion or provision of minimum Health and Safety standards specified herein or reviewed site-specific Health and Safety Plan shall be submitted to Departmental Representative in writing.

### 1.10 COMPLIANCE REQUIREMENTS

- .1 Comply with Ontario Occupational Health and Safety Act, R.S.O. 1990 Chapter 0.1, as amended.

### 1.11 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and

Safety Plan.

- .3 Where applicable the Contractor shall be designated "Constructor", as defined by Occupational Health and Safety Act and Regulations for Construction Projects for the Province of Ontario.

#### 1.12 UNFORSEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, immediately stop work and advise Departmental Representative verbally and in writing.
- .2 Follow procedures in place for Employees Right to Refuse Work as specified in the Occupational Health and Safety Act for the Province of Ontario.

#### 1.13 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
  - .1 Have site-related working experience specific to activities associated with abatement of lead and asbestos containing materials.
  - .2 Have working knowledge of occupational safety and health regulations.
  - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
  - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
  - .5 Be on site during execution of Work and report directly to and be under direction of site supervisor.

#### 1.14 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province of Ontario, and in consultation with Departmental Representative.
  - .1 Contractor's Safety Policy.
  - .2 Constructor's Name.
  - .3 Notice of Project.
  - .4 Name, trade, and employer of Health and Safety Representative or Joint Health and Safety Committee members (if applicable).
  - .5 Ministry of Labour Orders and reports.
  - .6 Occupational Health and Safety Act and Regulations for Construction Projects for Province of Ontario.
  - .7 Address and phone number of nearest Ministry of Labour office.
  - .8 Material Safety Data Sheets.
  - .9 Written Emergency Response Plan.
  - .10 Site Specific Safety Plan.
  - .11 Valid certificate of first aider on duty.
  - .12 WSIB "In Case of Injury At Work" poster.
  - .13 Location of toilet and cleanup facilities.

#### 1.15 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.

- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

#### 1.16 BLASTING

- .1 Blasting or other use of explosives is not permitted.

#### 1.17 POWDER ACTUATED DEVICES

- .1 Use of powder actuated devices is not permitted.

#### 1.18 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- .2 Assign responsibility and obligation to Health and Safety Coordinator to stop or start Work when, at Health and Safety Coordinator's discretion, it is necessary or advisable for reasons of health or safety. Departmental Representative may also stop Work for health and safety considerations.

### PART 2 - PRODUCTS

#### 2.1 NOT USED

- .1 Not used.

### PART 3 - EXECUTION

#### 3.1 NOT USED

- .1 Not used.

## PART 1 - GENERAL

### 1.1 INSPECTION

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

### 1.2 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work under Section 01 29 83, above and beyond those required of the Contractor. Cost of such services will be borne by Departmental Representative.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and re-inspection.

### 1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

#### 1.4 PROCEDURES

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

#### 1.5 REJECTED WORK

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

#### 1.6 REPORTS

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to Subcontractor of work being inspected or tested, manufacturer or fabricator of material being inspected or tested.

#### 1.7 MOCK-UPS

- .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in locations acceptable to Departmental Representative.
- .3 Prepare mock-ups for Departmental Representative's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .5 If requested, Departmental Representative will assist in preparing a schedule fixing dates for preparation.

#### 1.8 MILL TESTS

- .1 Submit mill test certificates as requested and required of specification Sections.



## PART 2 - PRODUCTS

### 2.1 NOT USED

.1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

.1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 WATER SUPPLY

- .1 Departmental Representative will provide continuous supply of potable water for construction use.
- .2 Departmental Representative will pay for utility charges at prevailing rates.

### 1.2 TEMPORARY HEATING AND VENTILATION

- .1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- .2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.
- .3 Provide temporary heat and ventilation in enclosed areas as required to:
  - .1 Facilitate progress of Work.
  - .2 Protect Work and products against dampness and cold.
  - .3 Prevent moisture condensation on surfaces.
  - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
  - .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .4 Maintain temperatures in occupied office areas.
- .5 Ventilating:
  - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
  - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
  - .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
  - .4 Ventilate storage spaces containing hazardous or volatile materials.
  - .5 Ventilate temporary sanitary facilities.
  - .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .6 Departmental Representative will pay utility charges when temporary heat source is existing building equipment.
- .7 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
  - .1 Conform with applicable codes and standards.
  - .2 Enforce safe practices.
  - .3 Prevent abuse of services.
  - .4 Prevent damage to finishes.
  - .5 Vent direct-fired combustion units to outside.

- .8 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

### 1.3 TEMPORARY POWER AND LIGHT

- .1 Departmental Representative will pay for power during construction for temporary lighting and operating of power tools, to a maximum supply of 230 volts, 30 amps.
- .2 Temporary power for electric equipment requiring in excess of above is responsibility of Contractor.

### 1.4 TEMPORARY COMMUNICATION FACILITIES

- .1 Provide and pay for temporary telephone, data hook up, lines and equipment necessary for own use and use of Departmental Representative.

### 1.5 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
  - .1 CSA Z797-09(R2014), Code of practice for Access Scaffold.
  - .2 CAN/CSA-Z321-96(R2006), Signs and Symbols for the Occupational Environment, withdrawn but still available from CSA, CCOHS and Techstreet.

### 1.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.

### 1.3 INSTALLATION AND REMOVAL

- .1 Prepare site plan indicating proposed location and dimensions of area to be used by Contractor, number of trailers to be used.
- .2 Identify areas which have to be graveled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such work after use.

### 1.4 SCAFFOLDING

- .1 Scaffolding in accordance with CSA Z797.
- .2 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms.

### 1.5 HOISTING

- .1 Provide, operate and maintain hoists/cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .2 Hoists/cranes shall be operated by qualified operator.

### 1.6 ELEVATORS

- .1 Designated existing elevators may be used by construction personnel and transporting of materials upon approval of Departmental Representative. Co-ordinate use with Departmental Representative.
- .2 Provide protective coverings for finish surfaces of cars and entrances.

### 1.7 SITE STORAGE/LOADING

- .1 Confine work and operations of employees to areas defined by Contract Documents. Do not unreasonably encumber premises with products.

- .2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

#### 1.8 CONSTRUCTION PARKING

- .1 Parking in accordance with Section 01 35 13.

#### 1.9 SECURITY

- .1 In accordance with Section 01 35 13.

#### 1.10 OFFICES

- .1 Provide office heated to 22°C, lighted 750 lx and ventilated, in location as directed by Director. Office of sufficient size to accommodate site meetings and furnished with drawing lay-down table.
- .2 Provide a clearly marked and fully stocked first-aid case in a readily available location.
- .3 Maintain in clean condition.

#### 1.11 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

#### 1.12 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 Permanent facilities may be used on approval of Departmental Representative.

#### 1.13 CONSTRUCTION SIGNAGE

- .1 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall conform to CAN/CSA-Z321.
- .2 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative.

#### 1.14 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative.
- .3 Protect travelling public from damage to person and property.

- .4 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .5 Dust control: adequate to ensure safe operation at all times.

#### 1.15 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material.

### PART 2 - PRODUCTS

#### 2.1 NOT USED

- .1 Not Used.

### PART 3 - EXECUTION

#### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

### 1.2 WEATHER ENCLOSURES

- .1 Provide weather tight closures to unfinished window openings.
- .3 Design enclosures to withstand wind pressure.

### 1.3 DUST TIGHT SCREENS

- .1 Provide dust tight screens to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such work is complete.

### 1.4 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

### 1.5 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

### 1.6 PROTECTION OF BUILDING FINISHES

- .1 Provide protection for building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

## PART 2 - PRODUCTS

### 2.1 NOT USED

.1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

.1 Not Used.

END OF SECTION



## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 Within text of specifications, reference may be made to reference standards.
- .2 Conform to these standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 The cost for such testing will be borne by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Bids, except where specific date or issue is specifically noted.

### 1.2 QUALITY

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

### 1.3 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time

to prevent delay in performance of Work.

- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Amount or Contract Time.

#### 1.4 METRIC SIZED MATERIALS

- .1 SI metric units of measurement are used exclusively on the drawings and in the specifications for this project.
- .2 The Contractor is required to provide metric products in the sizes called for in the Contract Documents except where a valid claim can be made that a particular product is not available on the Canadian market.
- .3 Claims for exemptions from use of metric sized products shall be in writing and fully substantiated with supportive documentation. Promptly submit application to Departmental Representative for consideration and ruling. Non-metric sized products may not be used unless Contractor's application has been approved in writing by the Departmental Representative.
- .4 Difficulties caused by the Contractor's lack of planning and effort to obtain modular metric sized products which are available on the Canadian market will not be considered sufficient reasons for claiming that they cannot be provided.
- .5 Claims for additional costs due to provision of specified modular metric sized products will not be considered.

#### 1.5 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber and plywood on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

#### 1.6 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.

#### 1.7 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, 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.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Amount or Contract Time.

#### 1.8 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

#### 1.9 CO-ORDINATION

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination.

#### 1.10 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

### 1.11 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

### 1.12 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00.
- .2 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of elements of project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of operational elements.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of separate contractor.
- .3 Include in request:
  - .1 Identification of project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work, and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect on Work of separate contractor.
  - .7 Written permission of affected separate contractor.
  - .8 Date and time work will be executed.

### 1.2 MATERIALS

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00.

### 1.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- .5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

### 1.4 EXECUTION

- .1 Execute cutting, fitting, and patching to complete Work.
- .2 Replace with new material and products existing interior window sills, trim, etc., removed or damaged during window removal.

- .3 Fit several parts together, to integrate with other Work.
- .4 Uncover Work to install ill-timed Work.
- .5 Remove and replace defective and non-conforming Work.
- .6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .7 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .8 Restore work with new products in accordance with requirements of Contract Documents.
- .9 Submit proposed materials, finishes and installation method for patching to Departmental Representative for approval, prior to patching.
- .10 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.

#### 1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse, recycling, composting and anaerobic digestion in accordance with Section 01 74 20.

### PART 2 - PRODUCTS

#### 2.1 NOT USED

- .1 Not Used.

### PART 3 - EXECUTION

#### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Provide and use clearly marked separate bins for recycling. Refer to Section 01 74 20.
- .6 Remove waste material and debris from site and deposit in waste container at end of each working day.
- .7 Dispose of waste materials and debris off site.
- .8 Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
- .9 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .10 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .12 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

### 1.2 FINAL CLEANING

- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.

- .4 Remove waste products and debris other than that caused by Owner or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass and hardware. Replace broken, scratched or disfigured glass.
- .8 Inspect finishes and fitments, and ensure specified workmanship and operation.
- .9 Remove dirt and other disfiguration from exterior surfaces.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION



PWGSC Ontario	CONSTRUCTION/DEMOLITION	Section 01 74 20
Region Project	WASTE MANAGEMENT AND	Page 1
Number R.075435.001	DISPOSAL	2015-08-13

## PART 1 - GENERAL

### 1.1 CONSTRUCTION & DEMOLITION WASTE

- .1 Carefully deconstruct and source separate materials/equipment and divert, from D&C waste destined for landfill to maximum extent possible. Reuse, recycle, compost, anaerobic digest except where indicated otherwise.
- .2 Source separate waste and maintain waste audits in accordance with the Environmental Protection Act, Ontario Regulation 102/94 and Ontario Regulation 103/94.
  - .1 Provide facilities for collection, handling and storage of source separated wastes.
  - .2 Source separate the following waste:
    - .1 Corrugated cardboard.
    - .2 Wood, not including painted or treated wood or laminated wood.
- .3 Submit a waste reduction workplan indicating the materials and quantities of material that will be recycled and diverted from landfill.
- .4 Submit proof that all waste is being disposed of at a licensed land fill site or waste transfer site. A copy of the disposal/waste transfer site's license and a letter verifying that said landfill site will accept the waste must be supplied to Departmental Representative prior to removal of waste from the demolition site.

### 1.2 WASTE PROCESSING SITES

- .1 Province of: Ontario.
  - .1 Ministry of Environment and Energy, 135 St. Clair Avenue West, Toronto, ON, M4V 1P5.
  - .2 Telephone: 800-565-4923 or 416-323-4321.
  - .3 Fax: 416-323-4682.
- .2 Recycling Council of Ontario: 215 Spadina Avenue, #225, Toronto, ON, M5T 2C7.
  - .1 Telephone: 416-657-2797.
  - .2 Fax: 416-960-8053.
  - .3 Email: rco@rco.on.ca.
  - .4 Internet: <http://www.rco.on.ca/>.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

### PART 3 - EXECUTION

#### 3.1 CANADIAN GOVERNMENTAL DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT

##### .1 Government Chief Responsibility for the Environment.

Province	Address	General Inquiries	Fax
Ontario	Ministry of Environment and Energy 135 St Clair Avenue West Toronto, ON M4V 1P5 Environment Canada Toronto, ON	(416) 323-4321 (800) 565-4923    (416) 734-4494	(416) 323-4682

END OF SECTION

## PART 1 - GENERAL

### 1.1 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
  - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
  - .2 Request Departmental Representative's Inspection.
- .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
  - .1 Work has been completed and inspected for compliance with Contract Documents.
  - .2 Defects have been corrected and deficiencies have been completed.
  - .3 Work is complete and ready for final inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

### 1.2 CLEANING

- .1 In accordance with Section 01 74 11.
- .2 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with Section 01 74 20.

## PART 2 - PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## PART 3 - EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUBMISSION

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

### 1.2 FORMAT

- .1 Organize data in the form of an instructional manual.
- .2 Binder: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 Arrange content by systems under Section numbers and sequence of Table of Contents.
- .4 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .5 Text: Manufacturer's printed data, or typewritten data.
- .6 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .7 Provide CAD files in dwg format. Forward pdf, MS Word, and Autocad dwg files on USB compatible with PWGSC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

### 1.3 CONTENTS - EACH VOLUME

- .1 Table of Contents: provide title of project;
  - .1 Date of submission; names,
  - .2 Addresses, and telephone numbers of Contractor with name of responsible parties;
  - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems.
- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00.

### 1.4 AS-BUILTS AND SAMPLES

- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Amendments and addenda.
  - .4 Change Orders and other modifications to the Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.
- .6 Turn one set, paper copy and electronic copy, of AS-BUILT drawings and specifications over to Departmental Representative on completion of work. Submit files on USB compatible with PWGSC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

- .7 If project is completed without significant deviations from Contract drawings and specifications submit to Departmental Representative one set of drawings and specifications marked "AS-BUILT".

#### 1.5 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of black line opaque drawings provided by Departmental Representative, and in copy of Project Manual.
- .2 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .3 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
  - .1 Field changes of dimension and detail.
  - .2 Changes made by change orders.
  - .3 Details not on original Contract Drawings.
  - .4 References to related shop drawings and modifications.
- .4 Specifications: legibly mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - .2 Changes made by Amendments and change orders.
- .5 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

#### 1.6 MATERIALS AND FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
- .2 Include instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

#### 1.7 WARRANTIES AND BONDS

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- .4 Verify that documents are in proper form, contain full information, and are notarized.
- .5 Co-execute submittals when required.
- .6 Retain warranties and bonds until time specified for submittal.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .2 DSHMS Report: Final Report, Designated Substance and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada - WESA Group Inc., March 2012, as attached at the end of specifications.

### 1.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.
- .2 Shop Drawings:
  - .1 Provide shop drawings and product data in accordance with Section 01 33 00.
  - .2 Provide drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
- .3 Prior to beginning of Work on site submit detailed Waste Reduction Workplan in accordance with Section 01 74 20 and indicate:
  - .1 Descriptions of and anticipated quantities of materials to be salvaged reused, recycled and landfilled.
  - .2 Schedule of selective demolition.
  - .3 Number and location of dumpsters.
  - .4 Anticipated frequency of tipping.
  - .5 Name and address of waste facilities.

### 1.3 DELIVERY, STORAGE AND HANDLING

- .1 Waste Management and Disposal:
  - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 20.

### 1.4 SITE CONDITIONS

- .1 Review designated substance report and take precautions to protect environment.
- .2 Should material resembling spray or trowel-applied asbestos or other designated substance listed as hazardous, other than those indicated in DSHMS Report, be encountered, stop work, take preventative measures, and notify Departmental Representative immediately.
  - .1 Do not proceed until written instructions have been received from Departmental Representative.



## PART 2 - PRODUCTS

### 2.1 EQUIPMENT

- .1 Leave equipment and machinery running only while in use, except where extreme temperatures prohibit shutting down.
- .2 Demonstrate that tools and machinery are being used in manner which allows for salvage of materials in best condition possible.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- .1 Do Work in accordance with Section 01 35 29.
- .2 Protection:
  - .1 Prevent movement, settlement, or damage to adjacent structures, utilities, and parts of building to remain in place.
  - .2 Keep noise, dust, and inconvenience to occupants to minimum.
  - .3 Protect building systems, services and equipment.
  - .4 Provide temporary dust screens, covers, railings, supports and other protection as required.

### 3.2 DEMOLITION SALVAGE AND DISPOSAL

- .1 Remove parts of existing building to permit new construction. Sort materials into appropriate piles for reuse and recycling.
- .2 Remove existing windows to be replaced according to schedule and sequence coordinated with Departmental Representative and Director.
- .3 Store removed windows as directed by Departmental Representative.
- .4 Trim edges of partially demolished building elements to tolerances as defined by Departmental Representative to suit future use.
- .5 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

### 3.3 REMOVAL FROM SITE

- .1 Transport material designated for alternate disposal to approved facilities listed in waste reduction workplan and in accordance with applicable regulations. Do not deviate from facilities listed in waste reduction workplan without prior written authorization from Departmental Representative.
- .2 Dispose of materials not designated for alternate disposal in accordance with

applicable regulations. Disposal facilities must be approved of and listed in waste reduction workplan. Do not deviate from disposal facilities listed in waste reduction workplan without prior written authorization from Departmental Representative.

#### 3.4 CLEANING AND RESTORATION

- .1 Keep site clean and organized throughout demolition procedure.
- .2 Upon completion of project, reinstate areas affected by Work to condition which existed prior to beginning of Work and to match condition of adjacent, undisturbed areas].

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

- .1 The Contractor is charged with abatement or remediation of hazardous materials solely where they must be altered, renovated, or damaged as part of the overall project.
- .2 Comply with requirements of this Section when performing following Work:
  - .1 Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- .3 The location and amount of asbestos containing material within the site building is described in the following documents:
  - .1 Final Report, Designated Substance and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada WESA Group Inc., March 2012.
  - .2 Joyceville Institution First & Second Floor Plan (PWGSC Drawing Number C-A1), June 2015.
- .4 Locations of known/identified friable asbestos containing material in the site building include (refer to 1.1.3.1 for associated drawings with the locations of known/identified asbestos containing material):
  - .1 First Floor:
    - Room 111: original window caulking at windows W13 and W26.
    - Room 147: original window caulking at windows W26 and W27.
    - Room 147a: original window caulking at window W16.
    - Room 109: original window caulking at windows W16.
    - Room 104: original window caulking at windows W14 and W15.
    - Room 103: original window caulking at window W13.
    - Room 118: original window caulking at window W12.
    - Room 119: original window caulking at window W12.
    - Room 120: original window caulking at window W12.
    - Room 121: original window caulking at windows W10 and W11.
    - Room 123: original window caulking at window W9.
    - Room 124: original window caulking at window W12R.
    - Room 125: original window caulking at window W12R.
    - Room 127: original window caulking at window W9.
    - Room 128: original window caulking at windows W12R and W18.
    - Room 114: original window caulking at window W17.
  - .2 Second Floor:
    - Room 202: original window caulking at windows W2 and W3.
    - Room 205: original window caulking at window W2.
    - Room 206: original window caulking at window W4.
    - Room 207: original window caulking at windows W7 and W8.
    - Room 209: original window caulking at window W2.
    - Room 210: original window caulking at windows W5 and W6.
    - Room 211: original window caulking at window W5.
    - Room 225: original window caulking at windows W1R.
    - Room 227: original window caulking at windows W20 and W1.
    - Room 214: original window caulking at window W23.

- Room 226: original window caulking at window W23.
- Room 215: original window caulking at windows W23 and W22.
- Room 230: original window caulking at window W22.
- Room 228: original window caulking at window W21.
- Room 219: original window caulking at window W21.
- Room 221: original window caulking at window W21.
- Room 224: original window caulking at windows W1R, W20, and W24.
- Room 222: original window caulking at windows W25, W24, and W1.
- Room 223: original window caulking at window W1.

- .5 The client is not responsible for costs associated with the failure of the Contractor to properly select or abide by the appropriate regulatory required abatement precautions.

## 1.2 REFERENCES

- .1 Ontario Ministry of Labour
- .1 O.Reg. 278/05 (as amended O. Reg 479/10): Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations.
  - .2 O.Reg. 490/09 (as amended O. Reg 148/12): Designated Substances.
  - .3 A Guide to the Regulations respecting Asbestos on Construction Projects and in Buildings and Repair Operations, May 2011, <http://www.labour.gov.on.ca/english/hs/pubs/asbestos/>
  - .4 Ontario Occupational Health and Safety Act.
- .2 Public Works and Government Services Canada.
- .1 Annex C - Appendix 6 - Work Procedures of PWGSC DM Directive 057 Asbestos Management.
- .3 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB-1.205-2003, Sealer for Application to Asbestos-Fibre-Releasing Materials.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
- .1 Material Safety Data Sheets (MSDS).
- .5 Transport Canada (TC)
- .1 Transportation of Dangerous Goods Act, 1992 (TDGA).
- .6 BluMetric Environmental Incorporated (formerly WESA Inc.)
- .1 Final Report, Designated Substances and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada, WESA Group Inc., March 2012.
  - .2 Joyceville Institution First & Second Floor Plan (PWGSC Drawing Number C-A1), June 2015.

## 1.3 DEFINITIONS

- .1 Amended Water: water with non-ionic surfactant wetting agent added to reduce water tension to allow wetting of fibres.

- .2 Asbestos Containing Materials (ACMs): materials that contain 0.5 per cent or more asbestos by dry weight and are identified under Existing Conditions including fallen materials and settled dust.
- .3 Asbestos Work Area: area where work takes place which will, or may disturb ACMs.
- .4 Authorized Visitors: Engineers, or designated representatives, and representatives of regulatory agencies.
- .5 Competent worker person: in relation to specific work, means a worker who:
  - .1 Is qualified because of knowledge, training and experience to perform the work.
  - .2 Is familiar with the Act and with the provisions of the regulations that apply to the work.
  - .3 Has knowledge of all potential or actual danger to health or safety in the work.
- .6 Friable Materials: material that when dry can be crumbled, pulverized or powdered by hand pressure and includes such material that is crumbled, pulverized or powdered.
- .7 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any dimension at 99.97% efficiency.
- .8 Non-Friable Material: material that when dry cannot be crumbled, pulverized or powdered by hand pressure.
- .9 Occupied Area: any area of building or work site that is outside Asbestos Work Area.
- .10 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects, over cuts and tears, and elsewhere as required to provide protection and isolation.
- .11 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must have appropriate capacity for scope of work.

#### 1.4 SUBMITTALS

- .1 Submit proof satisfactory to PWGSC representative or consultant that suitable arrangements have been made to dispose of asbestos-containing waste in accordance with requirements of authority having jurisdiction.
- .2 Submit Provincial and local requirements for Notice of Project Form.
- .3 Submit proof of Contractor's Asbestos Liability Insurance.
- .4 Submit to PWGSC representative or consultant necessary permits for transportation and disposal of asbestos containing waste and proof that asbestos containing waste has been received and properly disposed.

- .5 Submit proof satisfactory to PWGSC representative or consultant that all asbestos workers have received appropriate training and education by a competent person in the hazards of asbestos exposure, good personal hygiene, entry and exit from Asbestos Work Area, aspects of work procedures and protective measures while working in Asbestos Work Areas, and, where a worker requests a respirator, the use, cleaning and disposal of respirators and protective clothing.
- .6 Submit proof that supervisory personnel have attended asbestos abatement course, of not less than two days duration, approved by PWGSC representative or consultant. Minimum of one supervisor for every ten workers.
- .7 Submit Worker's Compensation Board status and transcription of insurance.
- .8 Submit documentation including test results, fire and flammability data, and Material Safety Data Sheets (MSDS) for chemicals or materials including:
  - .1 Encapsulants;
  - .2 Amended water;
  - .3 Slow drying sealer.
- .9 Submit proof satisfactory to PWGSC representative or consultant that employees who request or are required to wear a respirator, have respirator fitting and testing. Workers must be fit tested with respirator that is personally issued.

### 1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: comply with PWGSC, Ontario and local requirements pertaining to asbestos, provided that in case of conflict among these requirements or with these specifications more stringent requirement applies. Comply with regulations in effect at the time work is performed.
- .2 Health and Safety:
  - .1 Comply with the latest edition of the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act (refer to sections 1.2.1.1, 1.2.1.2, 1.2.1.3. and 1.2.1.4).
  - .2 Safety Requirements: worker and visitor protection.
    - .1 Protective equipment and clothing is not required to be worn by workers while in a Type 1, Minimal Precautions, Asbestos Work Area. Where a Worker requests a respirator or protective clothing, the requirements of O. Reg 278/05 (see section 1.2.1.1.) for a Type 1 Operation must be met.
  - .3 Eating, drinking, chewing, and smoking are not permitted in Asbestos Work Area.
  - .4 Ensure workers wash hands and face when leaving Asbestos Work Area. Facilities for washing hands and face shall be provided within or close to the Asbestos Work Area.
  - .5 Visitor Protection:
    - .1 Instruct Authorized Visitors in proper procedures to be followed in entering into and exiting from Asbestos Work Area.

## 1.6 EXISTING CONDITIONS

- .1 Reports and information pertaining to ACMs to be handled, removed, or otherwise disturbed and disposed of during this Project are bound into this specification.
- .2 Notify PWGSC representative or consultant of friable material discovered during Work or other materials believed to be designated substances or may create hazardous waste and not apparent from drawings, specifications, or report pertaining to Work. Do not disturb such material until instructed by PWGSC representative or consultant.

## 1.7 SCHEDULING

- .1 Inform sub trades of presence of asbestos- containing materials identified in Existing Conditions.
- .2 Hours of Work: perform work inside of normal working hours.

## 1.8 OWNER'S INSTRUCTIONS

- .1 Before beginning Work, provide PWGSC representative or consultant satisfactory proof that every worker has had instruction and training in hazards of asbestos exposure, in personal hygiene and work practices, and where a worker requests or is required to wear, in use, cleaning, and disposal of respirators and protective clothing.
- .2 Where a worker requests or is required to wear, instruction and training related to respirators includes, at minimum:
  - .1 Fitting of equipment.
  - .2 Inspection and maintenance of equipment.
  - .3 Disinfecting of equipment.
  - .4 Limitations of equipment.
- .3 Instruction and training must be provided by competent, qualified person.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Drop and Enclosure Sheets:
  - .1 Polyethylene: 0.15 mm thick.
  - .2 FR polyethylene: 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.
- .2 Wetting Agent: 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with water in concentration to provide thorough wetting of asbestos containing material.

- .3 Waste Containers: contain waste in two separate containers.
  - .1 Inner container: 0.15 mm thick sealable polyethylene bag, or where glove bag method is used, glove bag itself.
  - .2 Outer container: sealable metal or fibre type where there are sharp objects included in waste material; otherwise outer container may be sealable metal or fibre type or second 0.15 mm thick sealable polyethylene bag.
  - .3 Labeling requirements: affix preprinted cautionary asbestos warning, in both official languages, that is visible when ready for removal to disposal site.
- .4 Tape: tape suitable for sealing polyethylene to surfaces under both dry and wet conditions using amended water.
- .5 Slow - drying sealer: non-staining, clear, water - dispersible type that remains tacky on surface for at least 8 hours and designed for purpose of trapping residual asbestos fibres.
  - .1 Sealer: flame spread and smoke developed rating less than 50 and be compatible with new fireproofing.

## PART 3 - EXECUTION

### 3.1 SUPERVISION

- .1 Minimum of one Supervisor for every ten workers is required.
- .2 Approved Supervisor must remain within Asbestos Work Area during disturbance, removal, or other handling of asbestos-containing materials.

### 3.2 PROCEDURES

- .1 Comply with the latest edition of the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act.
- .2 Before beginning Work, remove visible dust from surfaces in work area where dust is likely to be disturbed during course of work.
  - .1 Use HEPA vacuum or damp cloths where damp cleaning does not create hazard and is otherwise appropriate.
  - .2 Do not use compressed air to clean up or remove dust from any surface.
- .3 Prevent spread of dust from Asbestos Work Area using measures appropriate to work to be done.
  - .1 Use FR polyethylene drop sheets over flooring such as carpeting that absorbs dust and over flooring in work areas where dust or contamination cannot otherwise be safely contained.
- .4 Remove loose material by HEPA vacuum; thoroughly wet friable material containing asbestos to be removed or disturbed before and during Work unless wetting creates hazard or causes damage.



- .1 Use garden reservoir type low - velocity sprayer or airless spray equipment capable of producing mist or fine spray.
- .2 Perform Work in a manner to reduce dust creation to lowest levels practicable.
- .5 Work is subject to visual inspection. Contamination of surrounding areas indicated by visual inspection will require complete enclosure and clean-up of affected areas.
- .6 Cleanup:
  - .1 Frequently during Work and immediately after completion of work, clean up dust and asbestos containing waste using HEPA vacuum or by damp mopping.
  - .2 Prior to disturbance of polyethylene sheeting, use water mist to control dust that may be re-entrained due to disturbance and or folding during de-mobilization of enclosures. Place dust and asbestos containing waste in sealed dust tight waste bags. Treat drop sheets and disposable protective clothing as asbestos waste and wet and fold to contain dust and then place in waste bags.
  - .3 Immediately before their removal from Asbestos Work Area and disposal, clean each filled waste bag using damp cloths or HEPA vacuum and place in second clean waste bag.
  - .4 Seal and remove double bagged waste from site in accordance with requirements of Ontario and PWGSC.
  - .5 Contractor is NOT to dispose, but is to make arrangements through PWGSC for disposal. Provide Certificate of Content and analysis documentation for the purposes of hazardous waste disposal. Packaging subject to acceptance by MOECC licensed contractor and general contractor is to confirm requirements with disposal contractor prior to packaging.
  - .6 Perform final thorough clean-up of Asbestos Work Areas and adjacent areas affected by Work using HEPA vacuum.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

- .1 The Contractor is charged with abatement or remediation of hazardous materials solely where they must be altered, renovated, or damaged as part of the overall project.
- .2 Comply with requirements of this Section when performing the following Work:
  - .1 Disturbance or removal of lead-containing coatings or materials using a power tool with an effective dust collection system equipped with a HEPA filter, where airborne lead concentrations are below 0.05 mg/m3.
  - .2 Removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap.
  - .3 Removal of lead-containing coatings or materials with non-powered hand tool, other than manual scraping and sanding.
- .3 The location and amount of lead-based paints/coatings within the site building is described in the following documents:
  - .1 Final Report, Designated Substance and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada WESA Group Inc., March, 2012.
  - .2 Joyceville Institution First & Second Floor Plan (PWGSC Drawing Number C-A1), June 2015.
- .4 Locations of known/identified lead-based paints/coatings in the site building to be disturbed by the window removal and replacement program (refer to 1.1.3.1 for associated table and drawings with the locations of known/identified lead containing material) in the exterior trim paint (brown with blue and green layers) and interior paint, include the areas around the following windows:
  - .1 First Floor:
    - Room 111: original window caulking at windows W13 and W26.
    - Room 147: original window caulking at windows W26 and W27.
    - Room 147a: original window caulking at window W16.
    - Room 109: original window caulking at windows W16.
    - Room 104: original window caulking at windows W14 and W15.
    - Room 103: original window caulking at window W13.
    - Room 118: original window caulking at window W12.
    - Room 119: original window caulking at window W12.
    - Room 120: original window caulking at window W12.
    - Room 121: original window caulking at windows W10 and W11.
    - Room 123: original window caulking at window W9.
    - Room 124: original window caulking at window W12R.
    - Room 125: original window caulking at window W12R.
    - Room 127: original window caulking at window W9.
    - Room 128: original window caulking at windows W12R and W18.
    - Room 114: original window caulking at window W17.
  - .2 Second Floor:
    - Room 202: original window caulking at windows W2 and W3.
    - Room 205: original window caulking at window W2.
    - Room 206: original window caulking at window W4.
    - Room 207: original window caulking at windows W7 and W8.

- Room 209: original window caulking at window W2.
  - Room 210: original window caulking at windows W5 and W6.
  - Room 211: original window caulking at window W5.
  - Room 225: original window caulking at windows W1R.
  - Room 227: original window caulking at windows W20 and W1.
  - Room 214: original window caulking at window W23.
  - Room 226: original window caulking at window W23.
  - Room 215: original window caulking at windows W23 and W22.
  - Room 230: original window caulking at window W22.
  - Room 228: original window caulking at window W21.
  - Room 219: original window caulking at window W21.
  - Room 221: original window caulking at window W21.
  - Room 224: original window caulking at windows W1R, W20, and W24.
  - Room 222: original window caulking at windows W25, W24, and W1.
  - Room 223: original window caulking at window W1.
- .5 The client is not responsible for costs associated with the failure of the Contractor to properly select or abide by the appropriate regulatory required abatement precautions.

## 1.2 REFERENCES

- .1 Health Canada  
.1 Workplace Hazardous Materials Information System (WHMIS), Material Safety Data Sheets (MSDS).
- .2 Ontario Ministry of Labour  
.1 O. Reg 490/09, Designated Substances as amended by O. Reg. 148/12 and O. Reg. 149/12.  
.2 Health and Safety Guideline "Lead on Construction Projects", April 2011.  
.3 Ontario Occupational health and Safety Act.
- .3 Transport Canada (TC)  
.1 Transportation of Dangerous Goods Act, 1992 (TDGA).
- .4 BluMetric Environmental Incorporated (formerly WESA Inc.)  
.1 Final Report, Designated Substances and Hazardous Materials Survey Report at Joyceville Institution Operated by Correctional Service of Canada, WESA Group Inc., March, 2012.  
.2 Joyceville Institution First & Second Floor Plan (PWGSC Drawing Number C-A1), June 2015.

## 1.3 DEFINITIONS

- .1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with a filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.
- .2 Authorized Visitors: PWGSC Representative or designated representatives.
- .3 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects over cuts and tears, and elsewhere as required to provide protection and isolation. For protection of underlying surfaces from damage and to prevent lead dust entering

in clean area.

- .4 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must be appropriate capacity for scope of work.
- .5 Action level: employee exposure, without regard to use of respirators, to airborne concentration of lead of 0.05 milligrams per cubic meter of air (0.05 mg/m<sup>3</sup>) calculated as 8-hour time-weighted average (TWA). Type 1 - Minimum precautions for lead abatement are based on airborne lead concentrations less than 0.05 milligrams per cubic meter of air for removal of lead based paint by methods noted in paragraph 1.1.
- .6 Competent person: Individuals capable of identifying existing lead hazards in workplace taking corrective measures to eliminate them.
- .7 Lead dust: wipe sampling on vertical surfaces and/or horizontal surfaces, dust and debris is considered to be lead contaminated if it contains more than 40 micrograms of lead in dust per square foot (=43 ug/100 cm<sup>2</sup>).

#### 1.4 SUBMITTALS

- .1 Provide proof satisfactory to PWGSC representative or consultant that suitable arrangements have been made to dispose of lead-based paint waste in accordance with requirements of authority having jurisdiction.
- .2 Provide proof of Contractor's General and Environmental Liability Insurance.
- .3 Quality Control:
  - .1 Provide PWGSC representative or consultant necessary permits for transportation and disposal of lead-based paint waste and proof that lead based paint waste has been received and properly disposed.
  - .2 Provide proof satisfactory to PWGSC representative or consultant that employees have had instruction on hazards of lead exposure, and aspects of work procedures and protective measures.

#### 1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: comply with PWGSC, Ontario and local requirements pertaining to lead paint, provided that in case of conflict among those requirements or with these specifications more stringent requirement applies. Comply with regulations in effect at time work is performed.
- .2 Health and Safety:
  - .1 Comply with the latest edition of the Ontario Occupational Health and Safety Act, and the Regulations made pursuant to the Act (refer to Section 1.2.2).
  - .2 Safety Requirements: worker and visitor protection.
    - .1 Protective equipment and clothing is not required to be worn by workers while in a Type 1, Minimal Precautions, Lead based paint Work area. Where a Worker requests a respirator or protective clothing, the requirements of O. Reg 490/09 (see section 1.2.1.1.) for a Type 1 Operation must be met.
  - .2 Eating, drinking, chewing, and smoking are not permitted in work area.

- .3 Dust and waste should be cleaned up at regular intervals and placed in a container that is dust tight, identified as containing lead waste, cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area, and removed from the workplace frequently and at regular intervals.
- .4 Drop sheets should be used below all lead operations which produce or may produce dust, chips, or debris containing lead.
- .5 Cleanup after each operation is encouraged to prevent lead contamination and exposure to lead.
- .6 Work area should be inspected at least daily to ensure that the work area is clean.
- .7 Compressed air or dry sweeping should not be used to clean up any lead-containing dust or waste from a work area or from clothing.
- .8 Ensure workers wash hands and face when leaving work area.
- .9 Visitor Protection:
  - .1 Instruct Authorized Visitors procedures to be followed in entering and exiting work area.

## 1.6 EXISTING CONDITIONS

- .1 Reports and information pertaining to lead based paint to be handled, removed, or otherwise disturbed and disposed of during this Project are bound into this specification.
- .2 Notify PWGSC representative or consultant of lead based paint discovered during Work or other materials believed to be designated substances or may create hazardous waste and not apparent from drawings, specifications, or report pertaining to Work. Do not disturb such material until instructed by PWGSC representative or consultant.

## 1.7 SCHEDULING

- .1 Inform sub trades of presence of lead- containing materials identified in Existing Conditions.
- .2 Hours of Work: perform work inside of normal working hours.

## 1.8 OWNER'S INSTRUCTIONS

- .1 Provide PWGSC representative or consultant satisfactory proof that every worker has had instruction and training in hazards of lead exposure, in personal hygiene, and in aspects of work procedures and where a worker requests or is required to wear, in the use, cleaning, and disposal of respirators and protective clothing.
- .2 Where a worker requests or is required to wear, instruction and training related to respirators includes, at minimum:
  - .1 Proper fitting of equipment.
  - .2 Inspection and maintenance of equipment.
  - .3 Disinfecting of equipment.
  - .4 Limitations of equipment.
- .3 Instruction and training must be provided by competent, qualified person.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Polyethylene 0.15 mm thick unless otherwise specified; in sheet size to minimize joints.
- .2 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under dry conditions and wet conditions using amended water.
- .3 Slow - drying sealer: non-staining, clear, water - dispersible type that remains tacky on surface for at least 8 hours and designed for purpose of trapping residual lead paint residue.
- .4 Lead waste containers: type acceptable to dump operator with tightly fitting covers and 0.15 mm thickness sealable polyethylene liners.
  - .1 Label containers with pre-printed bilingual cautionary Warning Lead clearly visible when ready for removal to disposal site.

## PART 3 - EXECUTION

### 3.1 SUPERVISION

- .1 One Supervisor for every ten workers is required.
- .2 Supervisor must remain within work area during disturbance, removal, or handling of lead based paints.

### 3.2 PREPARATION

- .1 Remove and store items to be salvaged or reused.
  - .1 Protect and wrap items and transport and store in area specified by PWGSC representative or consultant.
- .2 Work Area:
  - .1 Pre-clean fixed casework and equipment within work area using HEPA vacuum and cover and seal with polyethylene sheeting and tape.
  - .2 Clean work area using HEPA vacuum. If not practicable, use wet cleaning method. Do not raise dust.
  - .3 Seal off openings with polyethylene sheeting and seal with tape.
  - .4 Protect floor surfaces covered from wall to wall with polyethylene sheets.
  - .5 Maintain emergency fire exits or establish alternatives satisfactory to Authority having jurisdiction.
  - .6 Where water application is required for wetting lead containing materials, provide temporary water supply appropriately sized for application of water as required.
- .3 Do not start work until:
  - .1 Arrangements have been made for disposal of waste.

- .2 Tools, equipment, and materials waste containers are on site.
- .3 Arrangements have been made for building security.
- .4 Notifications have been completed and preparatory steps have been taken.

### 3.3 LEAD ABATEMENT

- .1 In areas of windows where lead based paint is disturbed, pack as it is being removed in sealable 0.15 mm plastic bags and place in labelled containers for transport.
- .2 After completion of stripping work, wire brush and/or wet sponge surface from which lead based paint has been removed to remove visible material. During this work keep surfaces wet.
- .3 After wire brushing and/or wet sponging to remove visible lead based paint, wet clean entire work area, and equipment used in process.

### 3.4 INSPECTION

- .1 Perform inspection to confirm compliance with specification and governing authority requirements. Deviations from these requirements not approved in writing by PWGSC representative or consultant will result in work stoppage, at no cost to Owner.
- .2 PWGSC representative or consultant will inspect work for:
  - .1 Adherence to specific procedures and materials.
  - .2 Final cleanliness and completion.
  - .3 No additional costs will be allowed by Contractor for additional labour or materials required to provide specified performance level.

### 3.5 FINAL CLEANUP

- .1 Prior to disturbance of polyethylene sheeting, use water mist to control dust that may be re-entrained due to disturbance and or folding during de-mobilization of enclosures. Remove polyethylene sheet by rolling it away from walls to centre of work area. Vacuum visible lead containing particles observed during cleanup, immediately, using HEPA vacuum.
- .2 Place polyethylene sheets, tape, cleaning material, clothing, and contaminated waste in plastic bags and sealed labelled waste containers for transport.
- .3 Contractor is NOT to dispose, but is to make arrangements through PWGSC for disposal. Provide Certificate of Content and analysis documentation for the purposes of hazardous waste disposal. Packaging subject to acceptance by MOECC licensed contractor and general contractor is to confirm requirements with disposal contractor prior to packaging.
- .4 Conduct final check to ensure no dust or debris remains on surfaces as result of dismantling operations.

### 3.6 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

- .1 Repair or replace objects damaged in course of work to their original state or better, as directed by PWGSC representative or consultant.

END OF SECTION



## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 Canadian Standards Association (CSA) International
  - .1 AAMA/WDMA/CSA-101/I.S.2/A440-08, NAFS - North American Fenestration Standard/ Specification for Windows, Doors and Skylights.
  - .2 AAMA/WDMA/CSA-101/I.S.2/A440S1-09, Canadian Supplement to AAMA/WDMA/CSA-101/I.S.2/ A440-08, NAFS - North American Fenestration Standard/Specification for Windows, Doors and Skylights.
  - .3 CSA A440.2-14/A440.3-14, Fenestration Energy Performance/User Guide to CSA A440.2-14 Fenestration Energy Performance.
  - .4 CAN/CSA-A440.4-07(R2012), Window, Door, and Skylight Installation.
  - .5 CAN/CSA-Z91-02, Safety Code for Window Cleaning Operations.
- .2 Insulating Glass Manufacturers Association of Canada (IGMAC)
  - .1 North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use - 2004.
- .3 Canadian General Standards Board (CGSB)
  - .1 CAN/CSB-1.108-M89, Bituminous Solvent Type Paint.
  - .2 CAN/CGSB-12.8-97, Insulating Glass Units.
  - .3 CAN/CGSB-19.13-M87, Sealing Compound, One-Component, Elastomeric, Chemical Curing.
  - .4 CAN/CGSB-79.1-M91, Insect Screens.
- .4 American Society for Testing and Materials International, (ASTM)
  - .1 ASTM A123/A123M-13, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - .2 ASTM C920-14a, Standard Specification for Elastomeric Joint Sealants.
  - .3 ASTM E90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
  - .4 ASTM E413-10, Classifications for Rating Sound Insulation.
  - .5 ASTM E1332-10a, Standard Classification for Rating Outdoor-Indoor Sound Attenuation.

### 1.2 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Sections 01 33 00 and 01 78 00.
- .2 Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim, junction between combination units elevations of unit, anchorage details, location of isolation coating, description of related components and exposed finishes fasteners, and caulking. Indicate location of manufacturer's nameplates

### 1.3 SAMPLE

- .1 Submit samples in accordance with Section 01 33 00.
- .2 Submit one window, conforming to contract documents in all respects, to job

site for review by Departmental Representative.

- .3 Fabricate remaining windows following review.
- .4 Remaining windows to match reviewed sample.
- .5 Sample window may be installed after review.

#### 1.4 MOCK-UP

- .1 Supply mock-up of one full size window installation complete with joint sealing and finish work to allow inspection of workmanship and materials.
- .2 Install in location as directed by Departmental Representative.
- .3 Reviewed and accepted mock-up will become standard of workmanship and materials and may remain as part of finished work.

#### 1.5 DESIGN DATA

- .1 Submit design data in accordance with Section 01 33 00.
- .2 Provide framing member structural and physical characteristics, calculations, dimensional limitations, special installation requirements.

#### 1.6 TEST REPORT

- .1 Submit test reports from approved independent testing laboratories, certifying compliance with specifications, for:
  - .1 Windows classifications.
  - .2 Anodized or Enamelled finish, weathering characteristics.
  - .3 Air tightness level.
  - .4 Specified DRWP.
  - .5 Specified wind load-positive.
  - .6 Specified snow load.
  - .7 Design pressure-positive.
  - .8 Design pressure-negative.
  - .9 Specified wind load-negative.
  - .10 Condensation resistance.
  - .11 Insulating glass units.
  - .12 Operating force.

#### 1.7 PRE-INSTALLATION MEETING

- .1 Convene pre-installation meeting one week before starting work of this Section.

#### 1.8 STORAGE AND HANDLING

- .1 Deliver, store, handle and protect materials in accordance with Section 01 61 00.
- .2 Store and handle glazed units on site in accordance with IGMAC recommendations.
- .3 Protect prefinished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

### 1.9 ENVIRONMENTAL REQUIREMENTS

- .1 Do not install sealants when ambient and surface temperature is less than 5°C.
- .2 Maintain this minimum temperature during and after installation of sealants.

### 1.10 WARRANTY

- .1 For the work of this Section 08 51 13 the 12 month warranty period prescribed in General Conditions GC3.13 is extended to three years.
- .2 For insulating glass units the 12 month warranty period prescribed in General Conditions GC3.13 is extended to five years.

### 1.11 CLOSEOUT SUBMITTALS

- .1 Provide operation and maintenance data for windows for incorporation into manual specified in Section 01 78 00.

### 1.12 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 20.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE/ DESIGN CRITERIA

- .1 Design and size components to withstand dead and live loads caused by pressure and suction of wind, acting normal to plane of system as calculated in accordance with NBC, for the area, as measured in accordance with ASTM E330.
- .2 Design and size components to withstand seismic loads and sway displacement as calculated in accordance with NBC.
- .3 Limit mullion deflection to flexure limit of glass L/175; with full recovery of glazing materials.
- .4 Maintain continuous air barrier and vapour retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
- .5 Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to the exterior by a weep drainage network.

### 2.2 PERFORMANCE/ DESIGN CRITERIA FOR CORRECTIONAL SERVICE CANADA

- .1 Windows shall meet Correctional Service Canada level CW2 (Commercial Level 2) - conventional window conforming to medium duty standards of CSA A440-08, with thermal glazing of medium duty heat tempered glass.
- .2 Windows: fabricated for re-glazing from interior.

## 2.3 MATERIALS

- .1 Aluminum alloy and finish: to AAMA/WDMA/CSA-101/I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/ A440S1, alloy AA6063 T54, minimum 50% recycled content, with an exposed aluminum finished in a anodic oxide treatment to Architectural Class 2 Anodic Clear or Colour Coating in accordance with Aluminum Association Specification AA M12C22A31 or AA M12C22A32/34, finish and colour as selected by the Departmental Representative.
- .2 Fasteners: stainless steel, type 303.
- .3 Thermal break: low thermal conductivity, cork-neoprene composition or extruded or poured rigid polyvinyl chloride, of quality and size to meet design requirements, compressed to seal between main sections and pressure plates.
- .4 Insulating glass unit (GL-1): to CAN/CGSB-12.8, factory-sealed, double glazing units, outer and inner pane of clear, 6 mm tempered glass separated by 12.7 mm argon filled, low-E coating on the No. 3 surface, listed on Qualified Products List issued by the Interdepartmental Qualification Board for windows.
  - .1 Acoustic performance: tested to ASTM E90, ratings as specified in 2.2 Fabrication.
- .5 Weatherstripping: to AAMA/WDMA/CSA-101/I.S.2/ A440 and AAMA/WDMA/CSA-101/I.S.2/A440S1.
- .6 Glazing Seals (mechanically keyed in gasket): extruded black, closed cell or dense elastomer of durometer appropriate to function. Roll in gasket to apply correct pressure on glass.
- .7 Sealant: one component, elastomeric, chemical curing to CAN/CGSB-19.13; elastomeric joint sealant to ASTM C920; Ecologo certified.
  - .1 Acceptable material:
    - .1 "Spectrem II" by Tremco Commercial Sealants & Waterproofing.
    - .2 "Dymonic 100" by Tremco.
    - .3 "Sikaflex 15LM" by Sika Canada Inc.
    - .4 "Sikasil WS-295" by Sika.
  - .2 Colour as selected by Departmental Representative.
  - .3 Sealant primer: type recommended by sealant manufacturer.
- .8 Sealant for glazing gaskets: to CAN/CGSB-19.13, Type 2, Classes 25, shore A hardness of 25 to 30, non-sag, neutral curing, black.
- .9 Bond breaker tape: Polyethylene bond breaker tape which will not bond to sealant.
- .10 Joint filler: extruded, closed cell urethane, 20 Shore A hardness, 140 kPa, tensile strength, oversized 30 to 50%, CFC free.
- .11 Glazing tape, blocks and splines: to AAMA/WDMA/ CSA-101/I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/ A440S1.
  - .1 Setting Blocks and Spacers: type recommended by the manufacturers of a durometer range of 80 to 90 on setting blocks and 40 to 50 on spacers.
- .12 Bituminous paint: acid and alkali resistant to CAN/CSB-1.108, type II, Ecologo certified.

- .13 Screens: to CAN/CGSB-79.1, Type 2 heavy duty, Class B sliding, Style 1 aluminum screening, 18 x 14 mesh; black baked enamel finish, standard S1 screen strength rating to AAMA/WDMA/CSA-101/ I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/A440S1.
- .14 Aluminum Flashing: 2.1 mm thick minimum pre-finished aluminum flashing to match aluminum framing.
- .15 Steel reinforcements and anchor plates: to CAN/CSA-G40.20/G40.21, Grade 300W, galvanized after fabrication.
- .16 Steel primer: to CAN/CGSB-1.40.
- .17 Foamed Air Seal, one component rigid urethane foam, one of the following:
  - .1 Acceptable material:
    - .1 "Versi-Tite" as manufactured by RHH Foam Systems Inc.
    - .2 "Hilti Foam CF126".
    - .3 "EnerFoam" as manufactured by Dow Chemical Company.
    - .4 "Handi Foam" as manufactured by Fomo Products Inc.
  - .2 Primers: in accordance with manufacturer's recommendations for surface conditions.

## 2.4 FABRICATION

- .1 Acoustic performance: to ASTM E90.
  - .1 Interior STC rating 35 to ASTM E413.
  - .2 Exterior OITC rating 28 to ASTM E1332.
- .2 Fixed windows (including fixed windows in combination units): to AAMA/WDMA/CSA-101/I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/A440S1, Class CW35 Performance Grade PG1680 (metric), Product Type FW, to the following performance levels.
  - .1 Air tightness level: fixed, minimum air leakage resistance of 0.2 L/(s.m2).
  - .2 Specified DRWP: 1410 Pa.
  - .3 Specified wind load-positive: 1.41 kPa.
  - .4 Design pressure-positive: 1680 Pa.
  - .5 Structural test pressure: 2520 kPa.
  - .6 Condensation resistance: I65 to CSA A440.2/A440.3.
  - .7 Thermal transmittance: maximum 1.8 W/(m2.K) to CSA A440.2/A440.3.
  - .8 Insulating glass units.
- .3 Single hung vertical sliding windows (including vertical sliders in combination units):  
to AAMA/WDMA/CSA- 101/I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/ A440S1, Class CW35, Performance Grade PG1680 (metric), Product Type VS, to the following performance levels.
  - .1 Air tightness level: A3, minimum air leakage resistance of 0.5 L/(s.m2).
  - .2 Specified DRWP: 1410 Pa.
  - .3 Specified wind load-positive: 1.41 kPa.
  - .4 Design pressure-positive: 1680 Pa.
  - .5 Structural test pressure: 2520 kPa.
  - .6 Condensation resistance: I65 to CSA A440.2/A440.3.
  - .7 Thermal transmittance: maximum 1.8 W/(m2.K) to CSA A440.2/A440.3.
  - .8 Insulating glass units.

- .9 Insect screens.
- .10 Operating force: 200 N to open, 100 N to maintain operation, to AAMA/WDMA/CSA-101/I.S.2/A440, Table 6.
- .4 Sliding windows (horizontal): to AAMA/WDMA/CSA- 101/I.S.2/ A440 and AAMA/WDMA/CSA-101/I.S.2/ A440S1, Class CW35, Performance Grade PG1680 (metric), Product Type HS, to the following performance levels.
  - .1 Air tightness level: A3, minimum air leakage resistance of 0.5 L/(s.m2).
  - .2 Specified DRWP: 1410 Pa.
  - .3 Specified wind load-positive: 1.41 kPa.
  - .4 Design pressure-positive: 1680 Pa.
  - .5 Structural test pressure: 2520 Pa.
  - .6 Condensation resistance: I65 to CSA A440.2/A440.3.
  - .7 Thermal transmittance: maximum 1.8 W/(m2·K) to CSA A440.2/A440.3.
  - .8 Insulating glass units.
  - .9 Insect screens.
  - .10 Operating force: 90 N to open, 45 N to maintain operation, to AAMA/WDMA/CSA-101/I.S.2/A440, Table 6.
- .5 Face dimensions detailed are maximum permissible sizes.
- .6 Units square and true with maximum tolerance of plus or minus 1.5 mm for units with a diagonal measurement of 1800 mm or less and plus or minus 3 mm for units with a diagonal measurement over 1800 mm.
- .7 Fabricate system components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- .8 Accurately fit and secure joints and corners. Make joints flush, hairline.
- .9 Arrange fasteners and attachments to ensure concealment from view.
- .10 Prepare components to receive anchor devices. Install anchors.
- .11 Reinforce framing members for external imposed loads.
- .12 Extruded aluminum sills to profiles indicated.
- .13 Form flashing to profiles indicated.
- .14 Build in structural deflection allowance to prevent transfer of structural load to windows.
- .15 Build thermal expansion allowance to withstand 85°C temperature difference without stressing sealants.
- .16 Visible manufacturer's identification labels not permitted.
- .17 Glazing: shop-install glazing in accordance with AAMA/WDMA/CSA-101/I.S.2/A440 and AAMA/WDMA/CSA-101/I.S.2/A440S1 and Glazing Recommendations for Sealed Insulating Glass Units.
  - .1 Lock strip gasket method for exterior aluminum windows:
    - .1 Unpack and lay out gaskets on flat warm area to permit recovery of shape.

- .2 Install gaskets under compression from corners inward. Seal corner junctions between gaskets.
- .3 Drain infiltrated moisture to exterior through drain holes in sill.
- .4 Install locking strip and gasket assembly to manufacturer's instructions.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- .1 Install in accordance with AAMA/WDMA/CSA-101/ I.S.2/A440, AAMA/WDMA/CSA-101/I.S.2/A440S1 and CAN/CSA-A440.4.
- .2 Install windows in accordance with manufacturer's instructions.
- .3 Apply bituminous paint to aluminum in contact with concrete and masonry.
- .4 Install units plumb, square and level to 1:400; free of warp, twist and superimposed loads; weather-tight.
- .5 Arrange components to prevent abrupt variation in colour.
- .6 Securely anchor units in place with concealed fasteners.
- .7 Do not bridge the thermal break between the interior and exterior sections of the frames with a metal which will destroy the thermal separation provided.
- .8 Provide thermal isolation where components penetrate or disrupt building insulation.
- .9 Fix sills in place, level, with uniform wash to exterior. Install drip deflectors.
- .10 Foamed-in-Place Air Seal:
  - .1 Prior to application, remove mortar, dirt, dust, moisture and other foreign matter from joints to be sealed.
  - .2 Apply seal in accordance with manufacturer's directions. Fill all joints between window assembly and adjacent construction.
- .11 Adjust opening sash and hardware to operate smoothly.

### 3.2 SEALING

- .1 Clean and dry joints.
- .2 Mask adjoining surfaces.
- .3 Insert joint filler 9.5 mm below joint surface.
- .4 Use bond breaker tape to prevent three-sided adhesion if joint depth does not allow for a joint filler (backer rod).

- .5 Prime joints when recommended by sealant manufacturer.
- .6 Apply sealant to manufacturer's instructions, including cold weather installation.
- .7 Form smooth concave surface.
- .8 Remove masking tape and sealant smears from adjacent surfaces.

### 3.3 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Remove traces of primer, caulking.
- .3 Remove glazing materials from finish surfaces.
- .4 Remove labels after work is complete.
- .5 Clean glass using approved non-abrasive cleaner in accordance with manufacturer's instructions.
- .6 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

### 3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 After installation, mark each light with an "X" by using removable plastic tape or plastic.
  - .1 Do not mark heat absorbing or reflective glass units.
- .3 Repair damage to adjacent materials caused by glazing installation.

END OF SECTION