CARDIN
JULIEN INC

LA MACAZA INSTITUTION

RENOVATIONS OF THREE VESTIBULES

321 ch. de l'aéroport
La Macaza, Quebec

PROJECT # : 550-2- 352-3729

SPECIFICATIONS

FOR QUOTATION

Ordre des architectes du Québec
PIERRE CARDIN
ARCHITECTE

Correctional Service Canada | Service correctionnel Canada

MARCH 2018 17-1764

5310, boulevard Saint-Laurent, Montréal (Québec) H2T 1S1, téléphone : 514-272-6798, télécopieur : 514-272-6821
courriel@crj.archi

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SPECIFICATIONS

OWNER

CORRECTIONAL SERVICE CANADA
321 Airport Road
La Macaza, Quebec J0T 1T0
Such. : (819) 275-2315, # 7083
Fax. : (819) 275-2110

Project manager :
Ms. Isabelle Roy , project manager
Technical Services - Institution La Macaza

ARCHITECTS

CARDIN JULIEN inc.
5310, boul. Saint Laurent
Montreal, Quebec, H2T 1S1
Such. : (514) 272-6798, # 21
Fax. : (514) 272-6821

Project manager : Mr. Pierre Cardin, architect

ENGINEERS IN MECHANICS / ELECTRICITY

MBI EXPERTS ADVICE
1600 Mingan Street
Laval , Quebec, H7Y 1Y8
Such. : (450) 689-8808

Project manager : Marc Beaudoin, engineer

1 GENERAL

1.1 REFERENCES

.1 National Building Code of Canada (NBC) 2010**,** including all amendments up to the bid closing date.

1.2 WORK DESCRIPTION

.1 The project includes the following works. The list below is not necessarily complete and does not detract from the obligation of the Contractor to complete the entire project in accordance with good engineering practice, general intentions and principles, as described further in this quote and drawings.

1. the replacement sections of aluminum-framed curtain walls and aluminum exterior doors and frames and hardware;
2. The replacement of the roof of a marquee;
3 . Repair of concrete slabs;
4. The construction of concrete block masonry wall sections with spray insulation and acrylic rendering coating on support panel;
5 . Replacement and patching of sections of interior gypsum panels;
6. The painting of all the rooms affected by the works.

1.3 SITE VISITS BY BIDDERS

1 For security reasons, inside the penitentiary the site visit will be done at a fixed time, at a specific time to tender documents. The meeting will take place at the main entrance of the institution concerned.

The visit of the places is mandatory .

2 Carry out the examination of the places and the particular conditions which could affect the works. The submission of a tender implies confirmation by the tenderer that he accepts the conditions.

1.4 CONTROL THE SAFETY

.1 All workers will be required to undergo a security check in order to be certified to a level of security as required by the Correctional Service of Canada and Public Works & Government Services Canada.

.2 Section 01 35 13 describes the detailed procedures for the security investigation.

.3 At the beginning of the work, a special assembly of site will be held in the presence of the representatives of the establishment to define the instructions of security and work site in prison.

1.5 CODES

.1 Perform work in accordance with the National Building Code of Canada (NB) and any other applicable provincial or local codes. In case of discrepancy or contradiction, the most stringent requirements will prevail.

.2 Execute work to meet all requirements :
.1 contractual documents;
.2 specified standards and codes and other referenced documents.

1.6 REQUIRED DOCUMENTS

.1 Keep on site a copy of each of the following documents :
.1 contractual drawings;
.2 specifications;
.3 addendum;
.4 revised shop drawings;
.5 change orders;
.6 other contract amendments;
.7 reports of field tests;
.8 approved schedule of work;
.9 installation and installation instructions provided by the manufacturers.

1.7 STATE OF THE BASEMENT

.1 Not applicable

1.8 SCHEDULE OF WORK

.1 Undertake planning works immediately after receiving the notice of acceptance of your offer. The work covered by this document, including corrections to construction defects, must be completed within the time frame specified in this document. Failure to comply with the schedule will be in accordance with Standard Procurement Terms and Conditions for Public Works and Government Services Canada (PWGSC).

.2 Within ten (10) working days following the award of the contract, submit the schedule of work indicating the progress of the various stages of the project and the date of completion of the work, **which must be completed within 15** weeks following the award of the contract .

.3 Within ten (10) business days of contract award, submit shop drawings, data sheets, samples, and safety investigation forms for approval.

.4 The sequence of work is defined as follows;
.1 Start-up meeting and submission of schedule, shop drawings, data sheets, samples and safety survey forms for approval;
.2 Approval of submitted documents;
.3 Beginning of the roadworks;
.4 Provisional acceptance;
.5 Training of maintenance staff;
.6 Correction of deficiencies
.7 Final acceptance.

.5 Within ten (10) business days of contract award, the Contractor shall provide, in a format acceptable to the Ministerial Representative , a schedule of work indicating :

.1 submission dates for shop drawings, material lists and samples;
.2 delivery dates for equipment and materials ;
.3 the start and end dates of the work described in each section of the specifications;
.4 the final date of completion of the work in relation to the completion time stipulated in the contract documents.

.6 Provisional revisions to the progress of the work, according to the submitted schedule, will be made at the discretion of the Ministerial Representative . The schedule will be updated by the Contractor, with the cooperation and approval of the Departmental Representative .

.7 **Work phasing**

.1 **The work will be done while the buildings are still occupied by the owner.** The Contractor shall follow the phasing of this section. He will have to prepare his schedule according to the requested phasing and adjust during construction.

The contractor will be required to submit a specific schedule of temporary partitions based on established phases for approval by the Departmental Representative.

The contractor will be able to make suggestions on site to optimize the work, but will have to rely on the phasing established for the submission.

During all phases of the project, the contractor must :

- Keep all means of egress accessible and safe.
- Construct, move and maintain temporary partitions, as described in section 1.9 of section 00 21 15 Supplemental General Conditions.
- Maintain the continuity of services during the works and in the changes between phases (electricity, ventilation, air conditioning, heating, etc.). **He has full responsibility for them.**

.2 The phases
The project is subdivided into 3 major phases .
Phase 1 :
All vestibule work on building D-20
This phase must be completed to proceed to Phase 2.
Phase 2 :
All vestibule work # 101 of building M-17
This phase must be completed to proceed to Phase 3
Phase 3 :
All vestibule work # 105 of building M-17

1.9 ACCEPTANCE OF EQUIVALENTS

.1 In the case where materials are specified by name or trade mark or by the name of the manufacturer or supplier, the submission must be based on the use of the designated materials. During the solicitation period, substitute materials may be considered provided that the Contracting Authority receives in writing complete technical data at least ten (10) days before the date set for solicitation closing. If alternative materials are approved for submission, an addendum to the solicitation documents will be issued.

.2 It is the contractor's responsibility to provide proof of equivalency. The request for equivalence must be clearly presented and include all the details that will enable the analysis to be done.

.3 The main criteria for accepting equivalents are : construction, performance, capacity, dimensions, arrangement of fittings, availability of spare parts, ease of maintenance, delivery times, existence of similar devices in service for some time.

.4 If the use of a device accepted as equivalent causes changes to the facilities shown on the plans or specifications, these changes will be the responsibility of the general contractor who will also have to take care of the modifications that may be required in the works. specialized contractors because of these changes.

1.10 BREAKDOWN OF COSTS

.1 Following acceptance of the bid , the Contractor must provide a detailed breakdown of the costs related to this bid , also showing the overall price of the contract **on the bid form provided in Annex.** Once approved, the cost breakdown will serve as a baseline for the calculation of down payments.

1.11 PAYMENT

.1 Not applicable

1.12 MEASUREMENT FOR PAYMENT

.1 Not applicable

1.13 USE OF PLACES BY THE CONTRACTOR

.1 During construction, the establishment must be kept in full operation; for this purpose, the Ministerial Representative may ask the contractor to temporarily stop the execution of a work on a temporary basis so as not to compromise the activities of the establishment.

.2 Use of the premises; limited access to the construction site. Work and works identified to be carried out outside the work site must be performed by a team accompanied by an escort provided by CSC, see section 01 35 13.

.3 Execute the work with the least possible disturbance to the occupants and ensuring, as far as possible, normal use of the premises. Agree with the Ministerial Representative to facilitate the execution of the work.

.4 Maintain existing services in buildings.

.5 No vehicles or mobile construction equipment may be left inside the establishment outside working hours. Construction vehicles must be stored (stored) in the parking lot in front of the postern (main entrance). Refer to section 01 35 13.

1.14 LOUD ATMOSPHERE AND CELLULAR TELEPHONE

.1 No radio or "thundering" equipment is allowed on the job site.

.2 The use or wearing of a cell phone is prohibited within the boundaries of the establishment.

1.15 PARKING ON THE SITE

.1 The contractor must restrict himself to the parking areas authorized by the Departmental Representative of the establishment.

1.16 WORKSHOP MEETINGS

.1 Hold site meetings at times and locations approved by the Departmental Representative.

.2 Notify all participants of a site meeting.

.3 The Ministerial Representative will organize site meetings, set the date and time, and prepare and distribute the minutes.

1.17 STAKING OF THE SITE

.1 Establish level ratings and stake out the work in detail from the control points and levels determined in the plans and specifications.

.2 Take full responsibility for the staking of the work and ensure its complete execution according to the location, lines and levels indicated.

.3 Provide the necessary material for staking and implantation.

.4 Provide the required materials, such as rules and templates, to facilitate the work of the Departmental Representative in the inspection of staking work.

.5 Provide stakes and other survey posts necessary for staking work.

1.18 LOCATION OF MISCELLANEOUS EQUIPMENT AND EQUIPMENT

.1 The location of the various appliances and equipment as well as the power outlets indicated in the drawings or specifications must be considered as approximate.

.2 Install appliances and equipment as well as distribution system components in a manner that minimizes congestion and preserves as much floor space as possible, in accordance with the manufacturer's recommendations for safety, access and maintenance. interview.

.3 Inform the Departmental Representative of the proximity of the installation date and ask for approval of the designated location.

.4 When requested by the Departmental Representative , submit tracking plans indicating the relative position of the various equipment and networks.

1.19 WORKS DISSIMUL STATEMENTS

.1 Unless otherwise noted, conceal pipes, ducts and wiring in floors, walls and ceilings of finished areas.

1.20 DRILLING AND SEALING

.1 Obtain approval from the Departmental Representative before cutting or drilling a bearing, or inserting a sleeve.

.2 Carry out the necessary drilling and sealing work so that the works to be connected or linked to others are accurate and play-free.

.3 Make the holes so that the banks are clean, straight and smooth.

.4 Where the addition of a new work involves modifications to an existing work, perform the drilling, sealing and other repairs necessary to restore the existing work to its previous state.

.5 Obtain the approval of the Departmental Representative before drilling, cutting or modifying a bearing element or inserting a sleeve.

.6 Make hermetic joints between works and pipes, sleeves, pipes and conduits.

1.21 EXISTING NETWORKS

.1 Where the work required requires connection to existing networks, carry out such work at the times determined by the competent authorities, with the least possible interference with the movement of pedestrians and vehicles

.2 Submit to the Departmental Representative the schedule of work and obtain approval at least 48 hours in advance for any interruption or interruption of existing networks or services. Make the cuts according to the approved schedule and give prior notice to those affected.

.3 If rear v has identified as non installations are discovered during construction, immediately notify the e Ministerial Representative and to send a written report on the findings.

.4 Remove all abandoned service lines within 2m of the works. Shut off pipes where they have been cut with a plug or other watertight device as directed by the Ministerial Representative .

.5 Keep a record of the location of the pipelines that are maintained in service, diverted or abandoned.

1.22 CHANGES, ADDITIONS TO EXISTING BUILDINGS

.1 Execute the work with the least possible disruption to the occupants and the public and ensuring, as far as possible, normal use of the premises. Agree with the Ministerial Representative to facilitate the execution of the work.

.2 At no time should the safety measures be reduced due to the work being contracted, take the necessary measures to ensure the necessary safety.

.3 Not applicable

.4 When work is being done in a busy location, provide and install any necessary protection for furniture, equipment and finishes, install dust screens, temporary warning signs and signs, and clean at the end of each evening of work.

1.23 ADDITIONAL DRAWINGS

.1 The Departmental Representative may provide the Contractor with additional drawings for clarification. These additional drawings will have the same meaning and scope as if they were part of the contract documents.

1.24 REMNANTS AND ANTIQUITIES

.1 Protect remains, antiques and other items of historical or scientific interest, such as cornerstones and their contents, commemorative plaques and other objects bearing inscriptions found during the work.

.2 Immediately notify the Departmental Representative and wait for written instructions before proceeding with work at this location.

.3 The remains, antiques and other objects of historical or scientific interest become the property of the Crown.

1.25 RESTRICTIONS ON THE USE OF TOBACCO

.1 Comply with restrictions that apply to smoking on Crown property.

1.26 PRE PRESENCE OF ASBESTOS

.1 The removal of cement-asbestos and asbestos-insulating panels can be dangerous for your health. The contractor must refer to the report of the decontamination consultant attached to complete the execution of the demolition work of asbestos panels.

1.27 OPERATING MANUAL

.1 The Contractor must provide, for approval, three (3) copies of an Operations Manual including the following items (in a three-ring binder) :
- a table of contents
- the list of suppliers and their coordinates
- the letters of guarantee
- approved shop drawings
- maintenance and operation manuals
- the drawings "as built"

1.28 WARRANTY

.1 Provide the "written descriptive" warranty against any defects for the one (1) year period and all other warranties requested in the quotation sections taking effect on the day of the certificate of provisional acceptance of the work by the Departmental Representative.

.2 This warranty will be signed by the manufacturers, subcontractors and the Contractor.

.3 This guarantee will bind them for this period.

.4 Any repair or replacement, as well as any damage done to other trades by faulty work of this section during the warranty period, will be resumed at the expense of the signatories of the warranty.

.5 The guarantee will be issued to the Ministerial Representative within fifteen days of the certificate of provisional acceptance of the work by the Ministerial Representative.

.6 In addition, the Contractor shall indemnify the Departmental Representative for any damage caused by a failure to work under this warranty.

.7 Neither the supervision of the works, nor the approval of the samples nor the materials or part of the works, nor the final acceptance of the works or the payment of the works by the Ministerial Representative, shall relieve the Contractor of the responsibility attributable to the labor and defective materials.

.8 The warranty requested in each section, does not change the civil liability established by the applicable articles of the Civil Code of Quebec, and does not diminish the warranties in excess of that normally provided by certain manufacturers.

1.29 STAFF TRAINING

.1 Not applicable

2 PRODUCTS NOT APPLICABLE

3 EXECUTION NOT APPLICABLE

END OF SECTION

1 GENERAL

1.0 APPLICATION

.1 The special requirements of the specifications complete the general conditions of the contract. In case of contradiction, the s general contract conditions prevail unless special provisions are more restrictive.

1.1 SUMMARY OF WORK

.1 Summary of work:
All the works indicated in the plans and specifications of the project are listed here as indicative but not limiting;

- Demolition of existing doors, windows and curtain walls
- Supply and installation of new exterior cladding + insulation
- The supply and installation of all new doors and windows
- All site preparation and site development work.
- All the work indicated: inside and outside the building.
- All demolitions indicated and not indicated but required for a complete execution of the works.
- Excavation work, foundation, concrete, wood and steel structure, etc.
- Temporary services of mechanics - electricity.
- All fencing, temporary protection and site safety.
- The cuts and connections with the utilities.
- All walls, interior partitions, windows, doors and frames.
- All lighting and electricity.
- Plumbing, heating and air-conditioning.
- All accessories and other equipment
- Subsequent openings and patches in the walls, ceilings and floors indicated and not indicated but necessary for a complete execution of the works.
- All the indicated works and those not indicated but necessary for a complete execution of the works.
- Daily households throughout the site and complete final cleaning of the site.
- All patches indicated and / or not indicated but necessary for a complete execution of the works.

1.2 SCOPE OF DOCUMENTS

.1 The contractual documents complement each other and any work required by one document and not mentioned in the other must be performed as required in both documents.

.2 The contract covers all the work that must be done by the Contractor and the subcontractors without the need to include in the estimate, the details of all the work resulting from the execution of the plans.

.3 Descriptions of materials or works that have a current meaning in their respective fields refer to standards so generally accepted, unless otherwise specified.

.4 If there is a contradiction between the contractual documents or conflict between plans at the time of execution of the work, a final decision will be made by e

Departmental Representative who shall be applied immediately by the contractor in order not to delay the work.

.5 No dimension will be taken to scale on the plans; only the written dimensions are authentic.

.6 If during the performance of the work, the Contractor discovers errors and / or omissions in the specifications or plans, he must refer to the Departmental Representative for clarification before undertaking such work. Failing to do so, he will be held responsible for the results obtained and must repair and remake, at his expense, these parts of the work without any recourse against the Departmental Representative.

.7 The Contractor will receive a CD of the plans and specifications issued for construction and one (1) hard copy. He will have to make the additional copies required for the contract and his needs.

1.3 SCOPE OF WORK

.1 The work described in the articles entitled "Scope of Work" should not in any way limit the work to be performed. Their only purpose is to serve as a memory aid. Consequently, the Contractor must ensure the complete and complete execution of the work necessary for the completion of the work.

1.4 COORDINATION OF THE PROJECT

.1 It is the responsibility of the contractor to coordinate the progress of the work, schedules, parts to be submitted, site use, temporary public services, site layout, etc.

1.5 PRELIMINARY EXAMINATION

.1 Inspect the condition of the works already executed, the surfaces and conditions that will receive the works described here. No work described in a section will be undertaken unless the adjacent or previous works and condition are in satisfactory condition.

.2 The decision to start work partially or totally implies that the Contractor considers the existing conditions to be satisfactory. Work done on defective surfaces or under unacceptable conditions will be resumed at its expense.

.3 Check all measurements and templates before starting any work.

.4 The imperfections, errors and / or omissions that would creep into the work of a trade will not serve as an excuse or excuse for errors, omissions or imperfections in the work of another trade.

1.6 MONITORING AND TESTING

.1 The Departmental Representative reserves the right to require laboratory analyzes, tests, tests, specialized studies or specific studies on materials to be used or already incorporated into the work.

.2 Facilitate the access to the site to any Inspector and collaborate with him in the operations required for these tests. These tests will be required only in cases where the Contractor can not prove, by other means, the accuracy of the materials used and in this case these tests will be at his expense.

.3 If the evidence shows that the materials are as specified, the Departmental Representative will reimburse the Contractor for the cost of the proofs only.

.4 The Departmental Representative also reserves the right to visit, or have an inspector visit, workshops, stores and warehouses to ensure that work is performed according to drawings and specifications.

.5 Provide all that is needed to make monitoring and verification as easy as possible at the plant and on the job site. This will include all the labor and equipment required to pick up and handle the test materials.

1.7 LABOR AND EQUIPMENT

.1 Only a specialized workforce will be used for each job.

.2 All work will be done according to the instructions of the Departmental Representative, using the most suitable equipment for each job.

.3 Some work will be done according to the recommendations of recognized manufacturers approved by the Departmental Representative.

.4 A copy of the instruction manual of each manufacturer supplying materials in this contract will be kept on site at the disposal of the Departmental Representative.

1.8 QUALITY CONTROL

.1 Inspection
- .1 The Departmental Representative shall have access to the works.
- .2 Where the works are to be subjected to special tests, inspections, approvals prescribed by the Departmental Representative or prescribed in the site regulations, make the request for inspection within a reasonable time.
- .3 In the event that the Contractor has covered or permitted the work to be covered before it has been subjected to the prescribed inspections, approvals or tests, to discover the work in question, to make the tests or inspection to the satisfaction of the authorities, then return the work to its original state.

.2 Provide the equipment required by the designated agencies to perform the inspection and testing.

.3 Reports

.1 Provide the Departmental Representative with 2 copies of the test and inspection reports without delay.

.2 Provide copies of these reports to the subcontractor or manufacturer or shaper of materials inspected or tested.

1.9 BUILDING DEVELOPMENT

.1 Existing elements (except trees)

Follow the requirements of this Article notwithstanding Article 2.3.7 of the General Administrative Clauses.

.1 Protection:

The Contractor must protect all existing facilities, utilities, structures or other structures as well as shrubs, ornamental plants and lawns encountered during the work.

.2 Interview:

.1 Not applicable

.3 In case of damage:

The Contractor must immediately notify the Departmental Representative of the damage he has caused and the danger created by the work; he shall, at his expense, restore or replace the damaged items in accordance with the instructions of the Departmental Representative and to the satisfaction of the latter and the owners affected by the work.

.2 Existing trees

.1 Not applicable

.3 Use of the premises by the contractor:

.1 Not applicable

.4 Signboards and posters

.1 Only approved signs can be installed on the job site.

.2 The layout, location and quantity of signs and posters must be approved by the Departmental Representative.

.3 Not applicable

.5 Installation and removal of temporary works

.1 Provide and install construction equipment and temporary works necessary to allow the work to proceed without delay.

.2 Once the work is completed, evacuate all these temporary works from the site.

.6 Temporary partitions and dust screens

.1 **Provide and install all temporary plywood partitions required during the work, and any dust screens or bulkheads required to prevent the spread of dust during the work that produces them and to protect finished and out-of-contract work areas**.

.2 Maintain and move the protective works until the end of the work.

.3 Depending on the phasing of the work, the Contractor must supply and install all ribbons, placards, signs required to redirect traffic to the appropriate access points to be determined by the Departmental Representative at the kick-off meeting.

.7 Storage and allowable loads

.1 The workers must perform the work within the limits indicated in the contract documents concerning their activities and movements. Do not clutter the premises unreasonably with equipment or materials.

.2 Do not load or allow to load any part of the work with a weight or force that could threaten its integrity.

.8 Electric power / water

.1 If applicable, make the necessary arrangements to connect to the appropriate utility network and the Contractor must assume all costs for installation, maintenance, disconnection and connection.

.2 Unless otherwise stated in the specifications, the temperature must be at least 10 ° C in areas where construction work is in progress. Ventilate heated areas and ensure, if applicable, that flue gases or exhaust gases are exhausted outside the building.

.3 The contractor may use the electrical energy of the building. He must first have checked the capacities and the connections to be made. Any modifications to the panels are the responsibility of the contractor and he assumes all liability related to the use of the building's electricity.

.4 The contractor may use running water from the building.

.9 Cleanliness of the site

.1 Keep the site in good order and cleanliness and free of waste materials and accumulated debris.

.2 The premises being used during the work, pick up waste materials **and debris, place them in containers and evacuate them from the building site (interior space) at the end of each working day.**

.3 Clean interior areas prior to finishing and keep them free of dust and other contaminants during this work.

.4 **Since the premises are used during the works, the general contractor is responsible for maintaining accessibility to the building and maintaining the release of the exits.**

.10 Site development

.1 The contractor must provide, in the parking lot, a construction trailer, (location to be specified at the kick-off meeting) for the duration of the work to install his office and space to host the site meetings.
The Contractor shall provide, in the temporary outdoor sanitation parking (location to be specified during the kick-off meeting) for the workers for the duration of the work.

1.10 MATERIALS AND EQUIPMENT

.1 Quality

.1 The products, materials, equipment and parts (called "products" in the specifications) used for the execution of the work must be new, in perfect condition and of the best quality (according to the terms of the estimate) for the purposes for which they are intended. If necessary, provide proof establishing the nature, origin and quality of the products provided.

.2 Products found to be defective will be rejected, regardless of the findings of previous inspections.

The purpose of the inspections is not to relieve the Contractor of his responsibilities but simply to reduce the risk of omission or error. The Contractor shall ensure the removal and replacement of defective products at his own expense and shall be responsible for any delays and costs arising therefrom.

.2 Warehousing, handling and protection of products

.1 Move and store products to avoid damaging, altering, or soiling, and following the manufacturer's instructions when applicable.

.2 Store the products in their original packaging, taking care to leave the label and seal of the manufacturer intact.

.3 Products likely to be damaged in bad weather should be kept in a weatherproof enclosure.

.3 Manufacturer's instructions

.1 Unless otherwise stated in the specifications, install or install the products according to the manufacturer's instructions. Do not rely on the indications on the labels and containers supplied with the products. Directly request a copy of the instructions in writing from the manufacturer.

.2 Notify the Departmental Representative in writing of any discrepancy between the requirements of the specifications and the manufacturer's instructions, so that appropriate measures can be taken.

.3 Failure to provide the notice required above, the Departmental Representative may require to remove and reinstall, without increasing the price of the contract, products that have been set up or installed incorrectly.

.4 Implementation

.1 The implementation must be of the highest possible quality and the work must be carried out by tradesmen, qualified in their respective discipline. Notify the Departmental Representative without delay if the nature of the work to be performed is such that the expected results are almost impossible to achieve.

.2 Do not hire unqualified or unskilled persons to perform the work assigned to them.

.3 The Departmental Representative may settle disputes concerning the quality of work performance and the skills of the workforce, and his decision is irrevocable.

.5 Concealing pipes

.1 Unless otherwise noted, conceal pipes, conduits, and electrical wiring in floors, walls, and ceilings.

.2 Before concealing the pipes, inform the Departmental Representative of any abnormal situation. Install according to the instructions of the Departmental Representative.

.3 The Contractor is responsible for providing a building with finished walls and ceilings.

All ventilation ducts, mechanical appliances, plumbing and other appliances ***are to be covered*** unless otherwise indicated, such as the wall or ceiling in which they are located, regardless of the levels or dimensions indicated for the rest of the ceiling or wall (eg ceiling fallout or installation of ducts or pipes to be done even if not explicitly indicated in the drawings).

1.11 LOCATION OF MISCELLANEOUS EQUIPMENT AND EQUIPMENT

.1 Not applicable

1.12 DRILLING AND SEALING

.1 Not applicable

1.13 EXISTING NETWORKS

.1 Not applicable

1.14 ADDITIONAL DRAWINGS

.1 Not applicable

1.15 CLOSURE OF THE CONTRACT

.1 Final cleaning

.1 When work is nearing completion, remove excess materials, tools, machinery and construction equipment that are no longer required for the work to be done.

.2 Remove from site waste materials and DEBR is periodically or dispose of according to guidelines u d Departmental Representative. Do not burn construction materials on site unless with the approval Departmental Representative.

.3 Sweep the work areas before the inspection work begins.

.4 Clean and polish glass components, mirrors, hardware, wall tiles, stainless steel, chrome, vitreous enamelled or baked enamel, laminated plastic, and mechanical and electrical appliances. Replace glass items that are broken, scratched or otherwise damaged.

.5 Removes stains, stains, marks or dirt from decorative objects, mechanical or electrical appliances, furnishing accessories, walls, and ceilings.

.6 Vacuum and dust the inside of the building and the back of the grilles, shutters and screens.

.7 Wash, seal, polish, degrease or prepare floors according to the manufacturer's recommendations.
.8 Sweep and wash walkways, steps and exterior surfaces.
.9 Remove dirt or other defects from exterior surfaces.

.2 Demonstration of the functioning of the systems
.1 Prior to the final inspection, demonstrate the operation of each system to the Departmental Representative.
.2 Provide instructions to personnel on the operation, adjustment and maintenance of equipment and systems using the supplied operating and maintenance manuals as a guide.

.3 Documents
.1 Collect submitted and verified documents and documents prepared by subcontractors, suppliers and manufacturers.
.2 Submit the appropriate documents before applying for final payment.
.3 Submit operating and maintenance data, and submit final drawings to the Project File.
.4 Provide guarantees and bonds signed before notary.
.5 Perform the formalities for the transfer of the performance bond and the labor and material payment bond to the warranty period.
.6 Submit a final accounting report giving the adjusted total price of the contract, previous payments and the outstanding balance.
.7 The Departmental Representative will issue a final change order reflecting previously approved contract price adjustments that have not been made previously.
.8 Submit a final report on the management and disposal of construction waste.

.4 Inspection and Possession Methods
.1 Before applying for a certificate of substantial completion of the work, carefully check the works and ensure that they are complete, that minor and major construction defects have been corrected and that the building is clean and in a suitable condition to be occupied.
The Contractor must provide a written and signed notice to the Departmental Representative to the effect that the work is completed completely and that he requests an inspection.
.2 During the inspection of u Departmental Representative, a list of defects and imperfections will be drawn. The Contractor must correct the deficiencies in the days following the visit and retransmit the list to the Departmental Representative with initials for each defect indicating that he has personally verified the correction of all deficiencies.
.3 **impairments: Professionals will make a maximum of 2 visits to establish deficiencies and control their correction by the general contractor. If the correction of deficiencies is poorly performed or incomplete according to the Departmental Representative, any other visit to this effect will be billed to the contractor.**
.4 When the Departmental Representative considers that the defects and imperfections have been corrected and that the contractual requirements have all been met, a certificate of completion may be issued.

1.16 SUBSTANTIAL COMPLETION OF THE WORK

.1 The work will not be final and delivered on certificate of substantial completion of the work of Representative ministerial for this purpose and formal acceptance by the Representative Ministerial m. The Contractor shall give notice Departmental Representative and the Representative ministerial accept work before handing the Representative ministerial all documents and certificates of approval of use, required by provincial and municipal laws and Local by-laws, including:
.1 The certificate of the CNSST and the CCQ

.2 Any other certificates and warranties that may be required under provincial or municipal laws or by-laws and other special warranties referred to in the specifications.

.3 A copy of the "as built" plans.

.4 Copies of approved shop drawings.

.5 Documents, catalogs, descriptive leaflets, manufacturer's instructions, maintenance leaflets, etc., as requested in the contract documents.

.6 Any warranties required of Contractors or Suppliers under the provisions of the Contract Documents.

.7 Sworn statement from the General Contractor that wages or wages of workers have been paid, in any case in strict accordance with the minimum wage scale of the Collective Labor Agreement relating to the construction industry whose territorial jurisdiction extends to the area where the construction is carried out.

.8 Sworn statement from the General Contractor that the materials incorporated into the building have been paid for.

.9 A sworn declaration that all subcontractors have been fully paid or have been paid up to a maximum of 10% of the amount of their contract.

.10 Representative ministerial issue substantial completion certificate accompanied the book, if any, of a list of work to be completed or corrected.

.11 The date entered in the certificate of substantial completion of the work will mark:
.1 The date on which the one-year general warranty begins and the other contractual guarantees

1.17 FINAL RECEPTION DOCUMENTS

.1 Upon final acceptance of the work, submit to the Departmental Representative two (2) copies of the operation and maintenance data, in French, prepared as follows:
.1 Enter data on loose sheets of 215 mm x 280 mm bound in a hardcover vinyl three-ring notebook;
.2 Enter the name of the facility, the date and the table of contents on the title page "Usage Data and Maintenance Guide";

.3 Divide the contents into sections according to those in this Quotation. Mark each section of a labeled tab, covered with celluloid, attached to the rigid paper dividing sheet.

.2 Include the following information in addition to the prescribed data:
.1 Manufacturers' guidelines for manufactured products and finished materials;
.2 The name, address and telephone number of subcontractors and suppliers;

.3 Various warranties and sureties indicating;
.1 the name and address of the works;
.2 the effective date of the warranty;
.3 the duration of the guarantee;
.4 the subject of the warranty and the remedy provided by the warranty;
.5 the signature and seal of the Contractor;
.6 additional equipment used as a spare part and mentioned in the various sections, as well as the name of the manufacturer and the source of supply.

.4 Properly type lists and remarks. Ensure the clarity of drawings, diagrams or publications of manufacturers;

.5 Add a complete set of separately linked shop drawings that carry the corrections and changes made during manufacture and installation

1.18 CONTRACTUAL GUARANTEES

.1 All contractual guarantees of the contractor, his sub - contractors, Suppliers and others shall be effective from the date of signature of the certificate of temporary acceptance of the work.

1.19 DRAWINGS AS BUILT

.1 The Contractor will provide the Departmental Representative with two (2) sets of opaque copies of the drawings, to be added to the project file.

.2 Keep the drawings and accurately record any deviations from them. contractual document requirements, changes imposed by the nature of the site, and all other types of changes made.

.3 Write in red the changes.

.4 Record the following information:
.1 Changes made as a result of changes ordered and orders received on the site.

.5 Once the work is completed and before the final inspection, transcribe carefully the corrections on the second set of drawings and deliver the two (2) complete sets to the Departmental Representative.

1.20 MANUALS OF MAINTENANCE AND EXPLOITATION OF ARCHITECTURE

.1 Binders with three (3) rings consisting of loose sheets of 215 x 280 mm, hardcover vinyl and provided with a pocket on the back of notebooks.

Provide, as a first step, a complete copy that will be verified and commented by the Departmental Representative. After examination, this copy will be corrected by the Contractor and returned to the Departmental Representative with two (2) other corrected copies. (Provide two (2) maintenance manuals in total)

.2 Indicate the contents of each notebook on the cover on the back of the notebook.

.3 contents
(Divisions 2 to 14):

.1 The cover of the notebook should contain the information following:
  .1 The date of submission
  .2 Project designation, location and number
  .3 The name and address of Contractor and all sub - contractors.
.2 Table of contents.
.3 The list of replacement equipment.
.4 The list of special tools specified.
.5 The list of spare parts.
.6 Guarantees.
.7 Copies of certificates of approval and other required certificates.
.8 Verified shop drawings and product descriptions.

1.21 SCREED

.1 In the context of this project, the contractor must make all necessary openings in the walls and floor (holes, openings, junctions of materials, etc.) and make all necessary patches, indicated and not indicated in the drawings, in order to complete the work. All surfaces of walls, floors and ceilings affected by work must be patched so that the existing parts preserved have a new appearance such as the new adjacent parts.
All surfaces damaged by temporary partitions must be patched (including paint) by the contractor.

1.22 WORKSHOP ASSEMBLIES

.1 Site meetings will be held regularly. The day and time will be determined during the start-up meeting.
.2 The Contractor will be required to convene at each meeting subcontractors and suppliers whose presence is required.
.3 The minutes of the site meetings will be drafted by the Departmental Representative and distributed to the parties concerned.

1.23 CODES AND REGULATIONS

.1 All the work of this estimate is governed by the following codes :
- Quebec Building Code - Chapter 1, Building, and National Building Code of Canada 2010 (as amended).
-Law on saving energy.

1.24 SECURITY AND PROTECTION

.1 The contractor is responsible for the building from the signature of the contract until the date of the certificate of completion.

.2 **The Contractor must declare his contract to the CSST and provide proof upon request at the beginning of the work.**

.3 The Contractor must take all necessary measures to ensure safety on the work site and to comply with all applicable standards and laws; In addition, the Contractor shall be under an absolute obligation to protect completed and running works, and to take all reasonable precautions to protect persons, works under construction (vandalism) and equipment and apparatus from the owner.

.4 The Contractor must protect its work in progress, the materials, products and tools present on site.

.5 The Departmental Representative hereby delegates to the Contractor the responsibility of principal contractor for the purposes of the application of the Act respecting Occupational Health and Safety (chapter S-2.1) as regards the execution of all the works of the construction site. The Departmental Representative retains the following prerogatives:
- All authority on the design of the work and the development of plans and specifications.
- Any authority over the supervision and approval of the work to determine the characteristics of the work to be started and to ensure its conformity with the plans and specifications.

.6 In addition, notwithstanding any inconsistent provision, the Contractor, his successors or assigns, undertake to protect and indemnify the Departmental Representative, his officers and employees from any penalties, expenses, claims or actions of any kind whatsoever. or, claimed by any person and arising directly, indirectly or incidentally from any operation or work performed or to be performed by the Contractor, its officers, agents, employees or any other person or firm acting under the contract that such penalties, expenses, claims or actions are owed to the Contractor or the sub-contractors or their respective officers, agents, employees or jointly owing to them or to one of them.

.7 The Contractor also undertakes, at its expense, to defend the Departmental Representative, his officers, agents or employees in any action taken against them or one of them and to pay the damages, costs and expenses, including fees and attorney fees that may result.

.8 See section 01 35 13

1.25 OVERSEER

A SITE SUPERVISOR FOR THE GENERAL CONTRACTOR MUST BE ON SITE FOR THE DURATION OF THE WORK AND WHENEVER WORK IS PERFORMED ON THE SITE.

1.26 DELAYS

.1 **The Contractor is required to respect the duration of the work established in the contract documents, ie 7 5 working days.**

To this end, he must foresee the deadlines of orders of materials and the presence on the spot of the workers in sufficient number for the respect of the calendar.

.2 Delayed delivery of the building: Except for exceptional weather conditions, **no delay in the execution of the work will be accepted.**

2 PRODUCTS NOT APPLICABLE

3 EXECUTION NOT APPLICABLE

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 Not applicable

1.3 ADMINISTRATIVE TERMS

.1 As soon as possible and in a predetermined order so as not to delay the execution of the work, submit the required documents and samples to the Departmental Representative for review. A delay in this respect can not be sufficient reason to obtain an extension of the period of execution of the works and no request to this effect will be accepted.

.2 Do not undertake work for which documents and samples are required before the review of all exhibits is completed.

.3 The characteristics indicated on shop drawings, data sheets and samples of products and works must be expressed in metric units (SI).

.4 When items are not produced or manufactured in metric units (SI) or characteristics are not given in metric units (SI), converted values may be accepted.

.5 Examine documents and samples before submitting them to the Departmental Representative. With this pre-audit, the Contractor confirms that the requirements applicable to the work have been or will be determined and verified, and that each of the submitted documents and samples has been reviewed and found to comply with the requirements of the Work and the Contract Documents. Documents and samples that are not stamped, signed, dated and identified in connection with the particular project will be returned unreviewed and will be considered rejected.

.6 Notify the Departmental Representative in writing, at the time of submitting the documents and samples, of any deviations from the requirements of the contract documents, and explain why.

.7 Ensure accuracy of on-site measurements against adjacent works affected by the work.

.8 The fact that the documents and samples submitted are examined by the Departmental Representative does not relieve the Contractor of its responsibility to transmit complete and accurate documents.

.9 The fact that the submitted documents and samples are examined by the Departmental Representative in no way relieves the Contractor of its responsibility to transmit parts that comply with the requirements of the contract documents.

.10 Keep a verified copy of each submitted document on site.

1.4 WORKSHOP DRAWINGS AND TECHNICAL SHEETS

.1 Submitted documents must be accompanied by a letter of transmittal in two (2) copies, containing the following information:
- .1 the date;
- .2 the name and number of the project;
- .3 the name and address of the Contractor;
- .4 the designation of each drawing, data sheet and sample as well as the number submitted;
- .5 any other relevant data.

.2 Submitted documents must show or indicate the following:
- .1 the date of preparation and the dates of revision;
- .2 the name and number of the project;
- .3 the name and address of the following persons:
  - .1 the subcontractor;
  - .2 supplier;
  - .3 the manufacturer;
- .4 the Contractor's stamp, signed by the authorized representative of the Contractor, certifying that the submitted documents are approved, that the measures taken on site have been verified and that the assembly complies with the requirements of the contract documents;
- .5 Relevant details for the portions of work involved:
  - .1 materials and manufacturing details;
  - .2 layout or configuration, including dimensions, including those taken on site, as well as clearance and clearances;
  - .3 details concerning assembly or adjustment;
  - .4 characteristics such as power, flow or capacity;
  - .5 performance characteristics;
  - .6 reference standards;
  - .7 the operational mass;
  - .8 wiring diagrams;
  - .9 single-line diagrams and schematic diagrams;
  - .10 links to adjacent structures.

.3 Distribute copies of shop drawings and data sheets once the Departmental Representative has completed the audit.

.4 Submit one (1) electronic copy of the shop drawings prescribed in the technical sections of the specifications and according to the reasonable requirements of the Departmental Representative (format 11x17 preferably for reasons of reproduction).
Three (3) copies of the drawings are provided only when specifically requested by the ministerial representative.

.5 If no shop drawing is required due to the use of a standard work product, submit one (1) electronic copy of the manufacturer's data sheets or documentation specified in the technical sections of the specification and required by the manufacturer. the Ministerial Representative.

.6 Submit one (1) electronic copy of the required test reports in the technical sections of the specifications and required by the Departmental Representative.
- .1 The report signed by the official representative of the test laboratory must certify that materials, products or systems identical to those proposed in the course of the work have been tested in accordance with the prescribed requirements.
- .2 The tests must have been performed within three (3) years from the date of contract award.

.7 Submit one (1) electronic copy of the certificates required in the technical sections of the specifications and required by the Departmental Representative
- .1 The documents, printed on the manufacturer's official letterhead and signed by a representative of the latter, must certify that the products, materials, equipment and systems supplied comply with the specifications of the specifications.
- .2 The certificates must bear a date after the award of the contract and indicate the name of the project.

.8 Submit one (1) electronic copy of the manufacturer's instructions prescribed in the technical sections of the specifications and required by the Departmental Representative.
- .1 Pre-printed documents describing the installation method for products, equipment and systems, including special notices and material safety data sheets indicating the impedances, the risks and the safety measures to be put in place.

.9 Submit one (1) electronic copy of the manufacturer's on-site inspection reports as specified in the specification sections and as requested by the Departmental Representative.

.10 Reports of tests and verifications performed by the manufacturer's representative to confirm the conformity of the installed products, materials, equipment or systems with the manufacturer's instructions.

.11 Submit one (1) electronic copy of the operation and maintenance sheets prescribed in the technical sections of the specifications and required by the Departmental Representative.

.12 Delete information that does not apply to the work.

.13 In addition to current information, provide any additional details that apply to the work.

.14 When the shop drawings have been verified by the Departmental Representative and no errors or omissions have been detected or only minor corrections have been made, the computer copy is returned, and the shaping and installation work done. can then be undertaken. If the shop drawings are rejected, the annotated copy (s) are returned and the corrected shop drawings are to be submitted again as indicated above before the finishing and installation work can be undertaken.

.15 The review of shop drawings by the Departmental Representative is intended solely to verify compliance with the general concept of the data indicated on them.

.1 This review does not imply that the Departmental Representative approves the detailed design presented in the shop drawings, which is the responsibility of the submitting Contractor, and does not release the Contractor from the requirement to submit complete and accurate shop drawings, and to comply with all the requirements of the works and the contractual documents.

.2 Without limiting the generality of the foregoing, it is important to specify that the Contractor is responsible for the accuracy of the on-site confirmed dimensions, the provision of information on the forming methods or the construction techniques, and installation and coordination of works executed by all trades.

1.5 SAMPLES

.1 Submit two (2) product samples for review, as specified in the technical sections of the specification. Label the samples indicating their origin and intended destination.

.2 Ship prepaid samples to the Departmental Representative's business office.

.3 Notify the Departmental Representative in writing, at the time of the submission of the product samples, of the deviations from the requirements of the contract documents.

.4 When the color, pattern or texture is the subject of a prescription, submit the full range of samples needed.

.5 Changes made to samples by the Departmental Representative are not intended to vary the contract price. If this is the case, however, notify the Departmental Representative in writing before proceeding with the work.

.6 Make changes to the samples that may be requested by the Departmental Representative while respecting the requirements of the contract documents.

.7 The examined and approved samples will become the reference standard from which the quality of materials and the quality of execution of finished and installed structures will be evaluated.

1.6 SAMPLES OF THE WORK

.1 Not applicable

1.7 PHOTOGRAPHIC DOCUMENTATION

.1 Submit one (1) copy of the standard digital color photographic file, in jpg format, on an electronic format, weekly with the progress report.

.2 Project identification: project name and number and date the photo was taken.

.3 Number of points of view: four (4).
.1 The views and their location will be determined by the Ministerial Representative.

.4 Frequency of submission of photos: every week.

1.8 CERTIFICATES AND MINUTES

.1 Submit the documents required by the relevant health and safety commission immediately after contract award.

.2 Submit copies of insurance policies immediately after contract award.

2 PRODUCTS NOT APPLICABLE

3 EXECUTION NOT APPLICABLE

END OF SECTION

1 GENERAL

1.1 OBJET

.1 Ensure that the construction project and the activities of the establishment are carried out without interruption or undue hindrance and that the security of the establishment is maintained at all times.

1.2 DEFINITIONS

.1 “Prohibited objects” Means:

at) Intoxicants, including alcoholic beverages, drugs or narcotics;

b) weapons or pieces of arms, ammunition and any object designed to kill, injure or incapacitate a person, or any object modified or assembled for such purposes, the possession of which has not been previously authorized;

c) explosives or bombs, or their components;

d) amounts of money, exceeding the prescribed limits $ 25.00; and

e) any other item not described in paragraphs a) to d), owned without prior authorization, and which may endanger the safety of persons or the penitentiary.

.2 "Unauthorized smoking items" means tobacco products including, but not limited to, cigarettes, cigars, tobacco, chewing tobacco and snuff, cigarette rollers, matches and lighters that are considered unauthorized items.

.3 "commercial vehicle "Means any motorized vehicle intended for the transportation of equipment, equipment or tools required for the construction project.

.4 "CSC "Means Correctional Service Canada.

.5 "director "Means the director of the institution, as the case may be, or their authorized representative.

.6 "Construction employees Means the employees of the prime contractor, one of the sub-contractors, equipment operators, equipment suppliers, testing and inspection laboratories, and regulatory agencies.

.7 "Departmental Representative" means the project manager of Public Works, Government Services Canada (PWGSC) or Correctional Service Canada (CSC) depending on the project.

.8 "Perimeter "Means the area of the facility surrounded by secure fences or walls restricting the movement of inmates.

.9 "Construction area Is the area where, as indicated in the contract documents, the contractor will be authorized to work. This may or may not be isolated from the institution's security enclosure.

1.3 PRELIMINARY MEASURES

.1 Before starting work, the contractor must meet the Representative ministerial to:
.1 discuss the nature and scope of all activities related to the project;
.2 to establish acceptable security measures on both sides in accordance with this Directive and the specific needs of the institution.

.2 The contractor must:
.1 ensure all construction employees are aware of CSC security requirements;

.2 ensure that CSC's security requirements are always posted prominently on the job site;

.3 Work with facility staff to ensure construction employees meet all safety requirements.

1.4 CONSTRUCTION EMPLOYEES

.1 The Contractor must provide the Departmental Representative with a list of names with dates of birth for all employees to work on the construction site, as well as a completed security check form for each employee.

.2 Provide two (2) weeks for the processing of security clearance requests. No employee will be admitted to the institution without a duly approved security clearance or a recent photo ID, such as a provincial driver's license. Security clearances are unique to each CSC institution and any authorization obtained from another institution is not valid for the institution where this project will be conducted.

.3 The Departmental Representative may require that the faces of construction employees be photographed and that photographs be posted at appropriate locations in the establishment or transferred to a database for identification purposes. The Departmental Representative may require that photo identification cards be produced for all construction employees. These cards must be left at the designated entrance where they will be given to the cardholder upon arrival at the establishment. They must be worn prominently on their clothing at all times while at the institution.

.4 Access to the property of the establishment is prohibited to anyone who has reason to believe that it could pose a risk to safety.

.5 Any person employed on the construction site will be immediately expelled e ownership of the property if:
.1 she appears to be under the influence of alcohol, drugs or narcotics;
.2 she has abnormal or disorderly behavior;
.3 she is in possession of a forbidden object.

1.5 VEHICLES

.1 Anyone leaving an unattended vehicle on the CSC property must close the windows, lock the doors and chests and remove the keys. The owner of the vehicle or the employee of the company owning the vehicle must ensure that the keys are kept secure on his person.

.2 At any time, the Ministerial Representative may limit the number and type of vehicles allowed on the premises of the establishment.

.3 The deliverers of material necessary for the project will be required to obtain a security clearance. The Ministerial Representative may require that they be accompanied by an employee of the establishment or a commissionaire.

.4 If the Departmental Representative allows trailers to be left inside the institution's security perimeter, the doors of the facility must be securely locked at all times, as must the windows, when trailers are left unoccupied. The windows will be protected by an expanded metal lattice. All trailers used for Contractor storage, both inside and outside the perimeter, must remain securely locked when not in use.

1.6 PARKING

.1 The Departmental Representative will identify authorized parking areas for vehicles of construction employees. Parking in other locations will be prohibited and offending vehicles may be towed.

1.7 SHIPMENTS

.1 Any delivery of materials, equipment or tools for the project must be addressed to the Contractor to distinguish it from shipments destined for the establishment. The Contractor must ensure that its employees are on site to receive shipments as CSC staff will **not** accept **any** delivery of materials, equipment or tools to the Contractor.

1.8 PHONES

.1 No installation of telephone, fax or computer connected to the Internet will be allowed inside the security perimeter of the facility without prior approval of the Representative ministerial.

.2 Representative ministerial will ensure that telephones, fax machines and computers with an Internet connection may not be installed in a place accessible to inmates. Access to each computer will be protected by a password, thus prohibiting any Internet connection by unauthorized personnel.

3 Unless expressly authorized by the Departmental Representative, cellular or digital cordless telephones, including but not limited to messaging devices, pagers, BlackBerries, telephones used as two-way radios, are prohibited in the establishment. If cell phones are eventually allowed their user will not allow their use by inmates.

.4 The Departmental Representative may authorize but restrict the use of two-way radios.

1.9 WORKING HOURS

.1 **All work at Building M-17 must be done during the week, Monday to Friday, between 6:00 pm and 6:00 am (Nightime Work). Work at Building D-20 must be done during the week, Monday to Friday, between 7:30 am and 4:00 pm (Daytime Work).**
Subject to paragraph 2 of this Article, no unauthorized work may be performed outside these hours. The Contractor shall, on a daily basis, outside the hours of work, ensure free and safe circulation of the areas affected by the work for all uses.

.2 **The contractor may request the Departmental Representative to carry out one-off day work (between 7:30 am and 4 pm) by submitting his application with a minimum of 48 hours notice.**

.3 Work is not permitted on weekends or statutory holidays without the express permission of the Ministerial Representative, which must be requested at least seven days in advance. In the event of an emergency, or in any other circumstance, this period may be canceled by the Ministerial Representative.

1.10 WORK OUTSIDE NORMAL WORKING HOURS

.1 Permission from the Ministerial Representative is required for any work performed outside normal working hours. The contractor must give at least forty - eight hours when it is necessary to perform approved work outside normal working hours. If overtime is required to complete an urgent task, for example, to pour concrete or to ensure construction safety, the Contractor must notify the Departmental Representative as soon as he or she is aware of such a necessity, and then follow the instructions given by the Ministerial Representative. Costs incurred by Canada as a result of this situation could be charged to the Contractor.

.2 When performing work outside of normal hours, or working on weekends or statutory holidays, and such additional work is authorized by the Departmental Representative, the Departmental Representative or the person designated by the Departmental Representative may additional security staff. The costs associated with this assignment could be billed to the contractor.

1.11 TOOLS AND EQUIPMENT

.1 Maintain on site a complete list of tools and equipment that will be used during the construction project. Make this list available for inspection when required.

.2 Maintain the list of tools and equipment specified above throughout the construction project.

.3 Never leave tools unattended, especially power tools, cartridge tools, cartridges, files, saw blades, carbide saws, wires, ropes, ladders, and any type of lifting equipment.

.4 Store tools and equipment in approved safe locations.

.5 Lock all toolboxes after use. Contractor's employees must keep keys with them at all times.

.6 Secure and lock unmounted scaffolds ; when erected, the scaffolding must be securely fixed to the satisfaction of the Ministerial Representative.

.7 Immediately notify the Departmental Representative of any loss or disappearance of any tool or equipment.

.8 The Departmental Representative will ensure that security personnel carry out controls of the Contractor's tools and equipment, based on the list provided by the Contractor:
.1 at the beginning and end of each project construction;
.2 every week, if the project lasts more than a week

.9 Some tools / equipment, such as cartridges and hacksaw blades, are very stringent items. The contractor will be given at the beginning of the day a sufficient quantity for the work of the day. The blades / cartridges used will be delivered to the representative at the end of each working day.

.10 When propane or natural gas is used to heat the project, the establishment will require an employee of the contractor to supervise the construction site outside of working hours.

1.12 KEYS

Keys of the detention hardware store

.1 The Contractor shall make arrangements with the supplier / installer of the detention hardware store, so that the keys of the detention hardware are delivered directly to the Institution, to the attention of the Agent responsible for the maintenance of the equipment. security.
.2 This Agent will give the Contractor a receipt for the keys of the detachment hardware store.
.3 The Contractor will provide a copy to the Ministerial Representative.

Other keys

.1 During the construction project, the contractor will use construction barrels in the finishing locks.
.2 The Contractor will provide its employees, and sub-contractors as required, with instructions for the safe storage of construction keys.
.3 At the end of each phase of the construction project, the CSC representative, in collaboration with the lock manufacturer, shall:
. 1 establish an operational slip of the keys;

. 2 receive keys and operational barrels for locks directly from the manufacturer; remove and return the construction barrels and install the final barrels.

.4 Once permanent detention locks are in place, CSC officers escorting construction employees will be required to obtain keys from the Security Equipment Maintenance Manager to open the doors for the Contractor's needs. He must inform his employees that only CSC officers who provide escorts will be allowed to use these keys.

1.13 DETENTION HARDWARE

.1 Return all existing detachment hardware removed to the Departmental Representative of the facility to ensure that it is disposed of or kept in a secure location for future re-use.

1.14 PRESCRIPTION DRUGS

.1 Employees of the Contractor who are required to take prescription medication during the work day are required to obtain authorization from the Departmental Representative to be allowed to bring the daily dosage with them.

1.15 RESTRICTIONS ON SMOKING

.1 Contractors and construction employees are not permitted to smoke inside correctional facilities or outdoors in the perimeter of a correctional facility. They must not, within the perimeter, have in their possession unauthorized tobacco products.

.2 Contractors and construction employees who violate this policy will be asked to immediately stop smoking or dispose of any unauthorized tobacco products. If they refuse to obey, they will be ordered to leave the establishment.

.3 Smoking will only be allowed outside the perimeter of the correctional facility at a location designated by the Departmental Representative.

1.16 PROHIBITED OBJECTS

.1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on the premises of the establishment.

.2 The discovery of prohibited object (s) on the construction site and the identification of the person (s) responsible for the presence of these objects must be reported immediately to the Ministerial Representative.

.3 Contractors must be vigilant with respect to their employees and the employees of their sub-contractors, since the discovery of a prohibited object may result in the cancellation of the employee's security clearance. A serious offense could result in the eviction of the site of the establishment of the company in question, for the duration of the construction project.

.4 If weapons or ammunition are found in the vehicle of a contractor, subcontractor, supplier or employee thereof, the security clearance of the driver of the vehicle will be revoked. field.

1.17 EXCAVATION

1 Any person and vehicle accessing the property of the establishment may be searched.

.2 When the Departmental Representative has reasonable grounds to believe that an employee of the Contractor is in possession of contraband or a prohibited object, he may require that person to be searched.

.3 The personal effects of any employee arriving at the establishment may be screened for the presence of prohibited drug residues.

1.18 ACCESS TO THE ESTABLISHMENT

.1 Except with the express authorization of the Ministerial Representative, construction and commercial vehicles will not be admitted to the establishment outside normal working hours.

1.19 VEHICLE TRAFFIC

.1 Vehicles may enter and exit the facility, under escort, through the vehicle barrier at the following times:
.1 08:00 to 11:30
.2 from 12:45 pm to 4:30 pm

Construction vehicles can not leave the facility until an inmate account has been completed.

.2 The Contractor must notify the Departmental Representative twenty - four (24) hours in advance of the arrival of heavy equipment, such as concrete mixers, cranes, etc.

.3 Vehicles loaded with soil or rubbish, or any other search, may not leave the establishment until a detainee account has been completed.

.4 Before a commercial vehicle is admitted to the premises of the establishment, the contractor or his representative must certify that the contents of the vehicle are definitely necessary for the construction project.

5 Access to CSC property will be denied to any vehicle whose content, in the opinion of the Departmental Representative, represents a risk to the security of the establishment.

.6 Private vehicles of construction employees are not allowed inside the security perimeter of medium or maximum security institutions without the express authorization of the Ministerial Representative.

.7 Subject to the prior authorization of the Ministerial Representative, a vehicle can be used in the morning to bring a group of employees to the site and in the evening to bring it back. This vehicle will not be able to stay on the premises during the day.

.8 With the authorization of the Ministerial Representative, certain equipment may be left on the building site at night or on weekends. These must be locked and their battery removed. The Departmental Representative may require equipment to be attached with a chain and padlock to another fixed object.

1.20 TRAFFIC OF CONSTRUCTION EMPLOYEES ON THE PROPERTY OF THE ESTABLISHMENT

.1 Subject to the need to maintain adequate security, the Departmental Representative will allow the Contractor and his employees as much freedom of action and movement as possible.

.2 However, notwithstanding the preceding paragraph, the Ministerial Representative may:
.1 prohibit or restrict access to any part of the establishment;
.2 Require that throughout the construction project, or at certain times, construction employees be accompanied by a CSC safety officer or commissioner in certain areas of the establishment.

.3 All construction employees must remain on site during the coffee / health breaks and dinner. They are not allowed to eat in the correctional officers' rest room or in the institution's dining room.

1.21 MONITORING AND INSPECTION

.1 Construction activities and movement of personnel and vehicles will be monitored and inspected by CSC security personnel to ensure that established security standards are met.

.2 CSC staff will ensure that construction workers understand the need for monitoring and inspections and that this understanding is maintained throughout the project.

1.22 WORK STOPPING

.1 At any time, the Departmental Representative may direct the Contractor, its employees, sub - contractors or their employees not to enter or leave the site immediately due to a security incident in progress. 'establishment. The site contractor foreman must then note the name of the CSC employee transmitting the order, the time of the instruction, and comply with the order received as soon as possible.

The Contractor must inform the Departmental Representative of the situation in the twenty - four hours after the work stoppage.

1.23 CONTACT WITH DETAINEES

.1 It is forbidden, without specific authorization, to get in touch with the prisoners, to talk to them, to give them objects or to receive them from them. Failure to comply with this directive will result in the expulsion of the employee's jobsite and the revocation of his / her security clearance.

.2 It should be noted that cameras are prohibited on CSC property.

.3 Notwithstanding the foregoing, if the Departmental Representative authorizes the use of photographic devices, it shall be strictly forbidden to photograph CSC inmates or employees or any part of the establishment whose photographing is not necessary for the photographic purposes. execution of this contract.

1.24 COMPLETION OF THE CONSTRUCTION PROJECT

.1 Upon completion of the construction project or, as the case may be, the taking over of the facilities, the contractor shall remove all materials, tools and equipment that are not identified in the construction contract as being left to the establishment.

END OF SECTION

1 GENERAL

1.1 CONTENTS OF THE SECTION

.1 The Contractor must manage its activities so that the health and safety of the public and site personnel and the protection of the environment always take precedence over issues related to the cost and schedule of work.

1.2 REFERENCES

.1 Canada Labor Code, Part II, Canada Occupational Safety and Health Regulations.

.2 Canadian Standards Association (CSA).

.3 Workplace Hazardous Materials Information System (WHMIS) / Health Canada.
.1 Material Safety Data Sheet (MSDS).

.4 Occupational Health and Safety Act, RSQ Chapter S-2.1 [2002].

.5 Safety Code for the Construction Industry, S-2.1, r.6 [2001].

1.3 SUBMITTALS / SUBMITTALS

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Transmit to the Departmental Representative, the prevention program specific to the construction site, as described in article 1.8, at least 10 days before the beginning of the work. The Contractor must subsequently update its prevention program if the course of work differs from its initial forecast. The Departmental Representative may, following the reception of the program and at any time during the works, require that the program be modified or supplemented to better reflect the reality of the site. The Contractor must then make the necessary corrections before the work begins.

.3 Submit to the Departmental Representative, within 24 hours, a copy of any inspection report, correction notice, or recommendation issued by federal or provincial inspectors.

.4 Submit to the Departmental Representative, within 24 hours, an investigation report for any accident resulting in an injury and any incident that highlights a risk potential.

.5 Submit to the Departmental Representative all MSDSs for the controlled products used on site, at least three days prior to their use on site.

.6 Transmit to the Departmental Representative copies of the training certificates that are required for the application of the prevention program, in particular:
.1 Health and general safety course for construction sites
.2 Certificate of security officer

.3 First aid in the workplace and cardiopulmonary resuscitation
.4 Works likely to emit asbestos dust
.5 Works in confined spaces
.6 Lockout procedure
.7 Wear and fit of personal protective equipment
.8 Safe driving of forklifts
.9 Elevating work platforms
.10 And any other training required by regulation or by the prevention program

.7 Medical exams When medical examinations are required under a law, regulation, directive, estimate or prevention program, the contractor must:
.1 Prior to the mobilization, send to the Departmental Representative the medical examination certificates of his supervisory staff and all his employees covered by the first paragraph of this article who will be present at the opening of the site.
.2 Transmit thereafter as and without delay the medical examination certificates of all new arrivals to the site which are referred to in the first paragraph of this article.

.8 Emergency plan : the emergency plan, as described in article 1.8.3, must be sent to the Departmental Representative at the same time as the prevention program.

.9 Notice of opening of site: the notice of opening of site must be transmitted to the Commission of the health and the safety of work before the beginning of works, with a copy to the Ministerial representative. A copy of this notice must also be posted prominently on the site. During demobilization, the notice of closure must be sent to the CSST, with a copy to the Ministerial Representative.

.10 Engineering plans and certificates of conformity: the Contractor must send to the CSST and the Departmental Representative a copy signed and sealed by an engineer of all the plans and certificates of conformity that are required under the Safety Code for the work of the construction (S-2.1, r.6), other Act, other regulation or other clause of the specifications or contract. A copy of these documents must be available at the construction site at all times.

.11 Certificate of conformity issued by the CSST : the Certificate of Conformity is a document issued by the CSST confirming that the contractor is in good standing with the CSST, that is to say that he has paid all the sums due in respect of a given contract. This document must be provided to the Departmental Representative at the end of the work.

1.4 RISK ASSESSMENT

.1 The Contractor must carry out a hazard identification for each of the tasks performed on the site.

.2 The Contractor must plan and organize the work in such a way as to promote the elimination of hazards at the source or collective protection and thus minimize the use of personal protective equipment. When personal fall protection is required, workers should use a safety harness in accordance with CAN / CSA-Z-259.10-M90. The seat belt must not be used as a fall protection.

.3 Equipment, tools or means of protection that can not be installed or used without compromising the health and safety of workers or the public are deemed to be inadequate for the work to be performed.

.4 All mechanical equipment must be inspected before delivery to the site. Before the use of mechanical equipment, the Contractor must send the Departmental Representative a certificate of conformity signed by a competent mechanic. The Departmental Representative may, at any time, if he suspects a defect or a risk of accident, order the immediate shutdown of the equipment and require a second inspection by a specialist of his choice.

1.5 MEETINGS

.1 A decision-making representative of the contractor must attend all and meetings where there is health and safety on the job site.

1.6 REQUIREMENTS OF REGULATORY BODIES

.1 Comply with all laws, regulations and standards that are applicable to the execution of the work.

.2 Observe prescribed standards and regulations to ensure normal work on sites contaminated with hazardous or toxic materials.

.3 Notwithstanding the date of publication of the standards indicated in the safety code for construction work, the version in force at the time it applies must always be used.

1.7 CONDITIONS OF THE FIELD / IMPLEMENTATION

.1 Not applicable

1.8 HEALTH AND SAFETY MANAGEMENT

.1 Accept and assume all the duties and obligations normally assigned to the principal contractor under the Act respecting occupational health and safety (RSQ, chapter S-2.1) and the Safety Code for the construction industry (S- 2.1, r.6).

.2 Develop a site-specific prevention program that is based on risk identification and implement this program from the beginning of the project to the final stage of demobilization. The prevention program must take into account the information in Article 1.7. It must be sent to all concerned, in accordance with the provisions of Article 1.2. The prevention program must include at least :
.1 Company policy on health and safety;
.2 The description of the work, the total cost of the work, the schedule and the expected staffing curve;
.3 The organization chart of health and safety responsibilities;
.4 The physical and material organization of the site;
.5 First aid and first aid standards;
.6 The identification of risks in relation to the site;

.7 The identification of risks in relation to the tasks performed, including the preventive measures and the methods of implementation;
.8 The required training;
.9 The procedure in case of accident / injury;
.10 The written commitment of all stakeholders to respect this prevention program;
.11 A site inspection grid based on preventive measures.

.3 The contractor must develop an effective contingency plan in relation to the characteristics and constraints of the site and its environment. The emergency plan must be sent to all concerned, in accordance with the provisions of article 1.2. The emergency plan must include :
.1 The evacuation procedure;
.2 Identification of resources (police, firefighters, ambulances, etc.);
.3 Identification of the persons responsible on the site;
.4 The identification of first-aiders
.5 The training required for the persons responsible for its application;
.6 And any other information that would be necessary, given the characteristics of the site.

1.9 RESPONSIBILITIES

.1 No matter the size of the job site or the number of workers present, appoint a competent person as supervisor and responsible for health and safety. Take all necessary measures to ensure the health and safety of people and property on the job and in the immediate environment of the site that could be affected by the work.

.2 Take all necessary measures to ensure compliance and compliance with the health and safety requirements contained in the contract documents, federal and provincial regulations, applicable standards and the site-specific prevention program. and comply without delay with any order or correction notice issued by the Commission de la santé et de la sécurité du travail.

.3 Take all necessary measures to keep the site clean and tidy throughout the work.

1.10 COMMUNICATION AND DISPLAY

.1 Take all necessary steps to ensure effective communication of health and safety information on site. Upon arrival at the site, all workers must be informed of the particularities of the prevention program, their obligations and their rights. The Contractor must insist on the right of workers to refuse to perform work if they believe that this work may compromise their health, safety, physical integrity or that of others present on the site. He must keep on the site and update a register with the information transmitted and the signature of all the workers who received this information.

.2 The following information and documents should be posted in an easily accessible place for workers:
.1 Notice of opening of the site;
.2 Identification of the project manager;

.3 Company policy on OSH;
.4 Site-specific prevention program;
.5 Emergency plan;
.6 Material Safety Data Sheets for all controlled products used on the site;
.7 Minutes of the site committee meetings;
.8 Name of the rescuers;
.9 Intervention and correction reports issued by the CSST.

1.11 UNEXPECTED

.1 When a source of danger not specified in the specifications and not identifiable during the preliminary inspection of the site appears by the fact or during the execution of the work, the Contractor must stop the work immediately, put in place protective measures workers and the public and notify the Ministerial Representative verbally and in writing. The Contractor must then make the necessary modifications to the prevention program so that the work can resume safely.

1.12 BLASTING

.1 Not applicable

1.13 SEALING GUNS AND OTHER CARTRIDGE DEVICES

.1 Pistols scellement cartridges or other devices are not allowed on the property of CSC. Refer to Section 01 35 13.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 Not applicable

.2 Not applicable

1.3 DOCUMENTS / SAMPLES SUBMITTALS - INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

1.4 ESTABLISHMENT AND COMPLETION ENL E EQUIPMENT

.1 Provide the necessary means of use for temporary utility services to enable the work to be carried out as quickly as possible.

.2 Disassemble the equipment and evacuate it when no longer needed.

1.5 STANDING WATER

.1 Provide temporary pumping and drainage facilities to keep the excavations and the ground free of standing water.

1.6 WATER SUPPLY

.1 Ensure the continuous supply of drinking water necessary for the execution of the works.

.2 Make the necessary arrangements to connect the network to that of the utility company concerned, and assume all costs of installation, maintenance and disconnection.

.3 Assume the cost of this service at the current rate.

1.7 HEATING AND VENTILATION

.1 Provide temporary heaters required for the construction period, operate and maintain them, and provide the required fuel.

2 Heaters used inside the building shall be vented to the outside or shall operate without open flame. It is forbidden to use solid fuel burning stoves.

.3 Provide appropriate room control (heating and ventilation) in enclosed spaces for the following purposes:
.1 to promote the progress of the work;
.2 protect works and products from moisture and cold;

.3 prevent the formation of condensation on surfaces;
.4 ensure appropriate ambient temperatures and humidity levels for the storage, installation and curing or curing of materials;
.5 meet the requirements of the regulations on safety measures at work.

.4 Where work is in progress, maintain the temperature at least 10 degrees Celsius.

.5 Ventilation
.1 Prevent the accumulation of dust, vapors and gases and fogging in areas that remain occupied during construction.
.2 Provide a local flue gas exhaust system to prevent the build-up of substances in the environment that may be hazardous to the occupants' health.
.3 Ensure that flue gases are vented safely and at a place where they will not pose a health hazard to people.
.4 Provide ventilation of storage spaces for hazardous or volatile materials.
.5 Provide ventilation for temporary sanitary facilities.
.6 Operate ventilation and evacuation equipment for a period of time after completion of the work to completely eliminate any contaminants that may have been generated during the various construction activities.

.6 It is permissible to use the building's permanent heating system when it is ready for commissioning. If applicable, assume full responsibility for any damage that may be caused.

.7 Not applicable

.8 Assume temporary heating costs when the building's permanent heating system is used for this purpose.

.9 Ensure at all times rigorous monitoring of the operation of the heating and ventilation equipment, ensuring that the following requirements are met.
.1 Comply with applicable codes and standards.
.2 Put into practice safe methods.
.3 Prevent waste.
.4 Prevent damage to finishes.
.5 Evacuate the combustion gases from direct-fired appliances to the outside.

.10 Assume full responsibility for damage to structures due to improper heating or protection conditions maintained during the work.

1.8 POWER SUPPLY AND LIGHTING

.1 Provide the service and assume the costs associated with the temporary power supply necessary for the lighting and operation of the mechanical tools during the work, up to a maximum of 230 V, 30 A.

.2 Make the necessary arrangements to connect the network to that of the utility company concerned, and assume all costs of installation, maintenance and disconnection.

.3 The power supply to cranes and other equipment operating under a current with characteristics superior to those mentioned in the preceding paragraph shall be provided by the contractor.

.4 Provide temporary lighting for the duration of the work and maintain the network. Appliances must provide at least 162 lux illuminance to floors and stairs. .

.5 Not applicable

.6 Not applicable

1.9 TELECOMMUNICATIONS

.1 The Contractor must provide temporary telecommunications facilities, including telephones, fax machines, data processing systems, including lines, and equipment required for its own use and for the use of the Departmental Representative; it must ensure the connection of these facilities to the main networks and assume the costs of all these services.

1.10 FIRE PROTECTION

.1 Provide and maintain the fire protection equipment required by the codes and regulations in force.

.2 It is forbidden to burn waste materials and construction waste on site.

2 PRODUCTS

.1 Not applicable

3 EXECUTION

3.1 TEMPORARY MEANS FOR CONTROLLING EROSION AND SEDIMENTS

.1 Establish temporary erosion and sediment control measures to prevent soil loss from stormwater runoff or wind erosion and entrainment of this soil on the ground. properties and adjacent pedestrian ways. These means must comply with the requirements of the competent authorities.

.2 Inspect, maintain, and repair defenses as required until permanent vegetation is established.

.3 Remove control resources at the appropriate time and rehabilitate and stabilize surfaces disturbed during this work.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 Not applicable

1.3 CLEANING OF THE WORKSITE

.1 Keep the site clean and free of accumulations of debris and waste materials, including those generated by the Owner or other contractors.

.2 Evacuate debris and waste materials from the jobsite daily, at predetermined times, or dispose of them as directed by the Departmental Representative. Waste materials must not be burned on site, unless this method of disposal is authorized by the Departmental Representative.

.3 Keep access routes free of ice and snow. Stack / stack snow in designated areas only.

.4 Make the necessary arrangements and obtain permits from the competent authorities for the disposal of debris and waste materials.

.5 Provide appropriate containers on site for the disposal of debris and waste materials.

.6 Provide and use, for recycling, separate and identified containers.

.7 Eliminate debris and waste materials at licensed sites accepting these materials and scrap.

.8 Clean interior surfaces before finishing work and keep these areas free of dust and other impurities during the work.

.9 Store volatile wastes in closed metal containers and evacuate them off site at the end of each shift.

.10 Ensure good ventilation of premises during the use of volatile or toxic substances. However, it is forbidden to use the ventilation system of the building for this purpose.

.11 Use only the cleaning products recommended by the manufacturer of the surface to be cleaned, and use them according to the recommendations of the manufacturer of the products in question.

.12 Establish the cleaning schedule so that dust, debris and other dirt do not fall on freshly painted wet surfaces and do not contaminate building systems.

1.4 FINAL CLEANING

.1 At substantial completion of work, remove surplus materials, tools, and construction equipment and materials that are no longer required to perform the remaining work.

.2 Remove debris and waste materials, except those generated by other contractors, and leave areas clean and ready to occupy.

.3 Prior to final inspection, remove surplus materials, tools, equipment and construction materials.

.4 Remove debris and waste materials, including those generated by the Owner or other contractors.

.5 Evacuate waste materials off site at predetermined times or dispose of them as directed by the Departmental Representative. Waste materials must not be burned on site, unless this method of disposal is authorized by the Departmental Representative.

.6 Make the necessary arrangements and obtain permits from the competent authorities for the disposal of debris and waste materials.

.7 Clean and polish glazing, mirrors, hardware, wall tiles, chrome or enamelled surfaces, laminate surfaces, stainless steel or porcelain enamel, and mechanical and electrical appliances. Replace any broken, scratched or damaged glass.

.8 Remove dust, stains, marks and scratches from decorative items, mechanical and electrical appliances, furniture items, walls, frames, windows, doors and floors.

.9 Clean reflectors, diffusers and other lighting surfaces.

.10 Dust the interior surfaces of the building and vacuum, and clean behind grilles, louvres, registers and mosquito nets.

.11 Wax, soap, seal or appropriately treat floor coverings as specified by the manufacturer.

.12 Examine finishes, accessories and materials to ensure that they meet the prescribed requirements for operation and quality of workmanship.

.13 Sweep and clean sidewalks, steps and other exterior surfaces; sweep or rake the rest of the field.

.14 Remove dirt and other debris from exterior surfaces.

.15 Clean and sweep roofs, gutters, English yards and window sinks.

.16 Sweep and clean hard surfaces.

.17 Thoroughly clean equipment and appliances, and clean or replace filters in mechanical systems.

.18 Clean roofs, downspouts, drains, drains and evacuations.

.19 Clear accessible crawl spaces and other hidden spaces from debris or surplus materials.

.20 Remove snow and ice from access roads to the building.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Sort the waste for recycling.

2 PRODUCTS NOT APPLICABLE

3 EXECUTION NOT APPLICABLE

END OF SECTION

1 GENERAL

1.1 OBJECTIVES

.1 Prior to commencement of work, meet with Departmental Representative to review PWGSC's waste management plan and objectives.

.2 PWGSC's goal for waste management is to reduce the total flow of construction / demolition waste to landfills by [75] per cent. Provide Departmental Representative with documentation certifying that comprehensive measures and procedures for waste management, recycling, reuse / reuse of recyclable and reusable materials have been implemented.

.3 Exercise maximum control of solid construction waste.

.4 Protect the environment and prevent pollution and environmental impacts.

1.2 RELATED REQUIREMENTS

.1 Section 02 41 99 Demolition - Works

1.3 REFERENCES

.1 Canada Green Building Council (CaGBC), Green Building Valuation System for New Buildings and Major Renovations, LEED Canada-NC, Version 1.0, December 2004.

1.4 DEFINITIONS

.1 Class III Hazardous Materials: Construction, renovation and demolition waste.

.2 Cost-income analysis plan (CRAP): A plan based on PRD data and used to monitor the economics of the methods used for waste management.

.3 Demolition Waste Audit (ADD): Applies to the waste actually generated by the work.

.4 Discharge - Inert waste: bituminous materials and concrete only.

.5 Source Waste Sorting Program (PTDS): On-site sorting of reusable / re- usable and recyclable waste to ensure that it is classified in the appropriate categories.

.6 Recyclability: The character of a product or material that can be recovered at the end of its life cycle and transformed into a new product for reuse or re-use.

.7 Recycle: Process of collection or transformation of waste and used materials, intended to allow their reintroduction in a cycle of consumption in quality of new products.

.8 Recycling: Operations that include the sorting, cleaning, processing and reconstitution of solid waste and other discarded materials or materials, designed to promote their use in a form different from their original state. Recycling does not include combustion, incineration or thermal destruction of waste.

.9 Reuse / reuse: Repeated use of a product or material in its original form, for different use in the case of reuse and similar use in the case of reuse. Reuse / reuse includes the following:
.1 The recovery of products and materials that can be reused / reused, generated by the modernization of a structure or structure, prior to their demolition, for resale, reuse, re-use within the same project or storage for future use.
.2 The return to suppliers of products and materials that can be reused / reused, such as pallets and unused products.

.10 Recovery: Removal of load bearing and non-load bearing components and construction materials during deconstruction or disassembly of industrial, commercial or institutional structures for reuse / recycling or recycling.

.11 Sorted waste: Waste already classified by type.

.12 Sorting at source: Separation of different types of products and waste materials from the moment they become waste.

.13 Waste Audit (AD): Detailed statement of the products and materials of which a building is constituted. AD includes the evaluation, in volume and mass, of the quantities of waste materials and waste generated by construction, renovation, deconstruction or demolition. The quantities of materials reused / reused, recycled and landfilled must be shown separately (Annex A).

.14 Waste Management Coordinator (CGD): Contractor's representative responsible for overseeing waste management activities and coordinating reporting requirements, documents and samples to be submitted.

.15 Waste Reduction Plan (PRD): A written document that examines waste reduction, reuse or recycling opportunities (Appendix B). The PRD is based on the data indicated on the waste control sheet (Appendix A).

1.5 DOCUMENTS

.1 Keep a copy of each of the following documents on the job site:
.1 waste audit;
.2 waste reduction plan;
.3 waste sorting plan at the source;

1.6 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Submittal procedures.

.2 Not applicable

.3 Submit, before the final payment, a summary of the waste recovered for reuse / reuse, recycling or disposal, supported by a decommissioning / dismantling audit.
- .1 Failure to submit the prescribed summary may result in withholding the final payment.
- .2 Provide receipts, weigh tickets, waybills, and quantities and types of waste materials reused / reused or eliminated.
- .3 For each waste material generated by the project and reused / reused, sold or recycled, as well as the destination.
- .4 For each waste material generated by the project and landfilled or incinerated, indicate the quantity, in tonnes, and the name of the landfill, incinerator or transfer station.

1.7 AUDIT OF WASTE (AD)

.1 Perform the AD before [start of work].

.2 Prepare the AD (Appendix A).

.3 Record on the AD (Appendix A) the contents of the materials or products used in recycled or reused / reused materials or products.

1.8 WASTE REDUCTION PLAN (PRD)

.1 Prepare the PRD before starting work.

.2 The PRD must include, but not be limited to, the following.
- .1 The destination of the waste materials indicated.
- .2 The techniques and the deconstruction / disassembly sequence.
- .3 The schedule of deconstruction / dismantling work.
- .4 The location.
- .5 Security measures.
- .6 Protection measures.
- .7 The precise indication of the storage areas.
- .8 Details regarding the handling and removal of waste materials.
- .9 The quantities of waste materials that will be salvaged for reuse and will be landfilled.

.3 Organize the waste reduction plan so that the different actions have priorities that respect the hierarchy of 3Rs, that is, in descending order of importance, reduction, reuse / reuse and recycling.

.4 Describe the method of waste management.

.5 From the data indicated on the AD, identify the possibilities of reduction, reuse / recycling or recycling of waste materials.

.6 Post the PRD, or a summary of it, on the job site, where workers can read it.

.7 Set realistic goals for waste reduction; identify existing constraints and develop strategies to eliminate them.

.8 Follow up on waste reduction produce a report; indicate the total volume of waste materials actually removed from the site and the cost of the operation.

1.9 DEMOLITION WASTE AUDIT (ADD)

.1 Prepare the ADD before starting work.

.2 Complete the ADD (Appendix C).

.3 Provide an inventory of the quantities of waste materials to be recovered for reuse, recycling or disposal.

1.10 COST-REVENUE ANALYSIS PLAN (PACR)

.1 Prepare a PACR (Appendix D).

1.11 SOURCE WASTE DISPOSAL PROGRAM (PTDS)

.1 Prepare the PTDS before starting work.

.2 Following the methods authorized by the Departmental Representative and with the authorization of DCC, implement the PTDS for all waste generated by the work.

.3 Provide on-site facilities for collecting, handling and storing anticipated quantities of reusable / reusable and recyclable waste materials.

.4 Provide containers in which reusable / reusable and recyclable waste materials will be deposited.

.5 Place the containers in areas where it will be easy to put the waste materials in without jeopardizing the activities of the site.

.6 Place sorted waste materials at [a] location (s) where they will suffer the least possible damage.

.7 Waste materials must be collected, handled and stored on site and disposed of in the sorted state.
.1 Recovered waste materials must be transported [to the approved and authorized recycling facility] [to users of waste materials to be recycled].

.8 Waste materials must be collected, handled and stored on site and disposed of in unsorted condition.
.1 Recovered waste materials must be shipped to [a site operated under a Certificate of Approval] [the Place of the Owner].
.2 Waste materials should be sorted into relevant categories for reuse / recycling or recycling.

1.12 WASTE TREATMENT SITE

.1 [Province] [Territory]: [_____].
.1 Name: [_____].
.2 Phone : [_____].
.3 Fax: [_____].

1.13 STORAGE, HANDLING AND PROTECTION OF MATERIALS

.1 Stocker at the locations indicated by the Departmental Representative waste materials recovered for reuse / recycling or recycling.

.2 Unless otherwise specified, waste materials that must be disposed of become the property of the Contractor.

.3 N/A

.4 N/A

.5 Frames left in place, not demolished, must be protected against movement and damage.

.6 Support works affected by the work. If the security of the building is at risk of being compromised, stop the work and immediately notify [Departmental Representative] [DCC Representative] [Consultant].

.7 Protect drainage works from surface water to prevent damage or obstruction; protect electrical and mechanical installations.

.8 Sort and store in the designated areas the waste materials generated by the dismantling of the structures.

.9 Prevent contamination of waste materials destined for recovery and recycling, in accordance with the acceptance conditions of designated facilities.

.1 It is recommended to sort the waste materials at the source.
.2 Evacuate waste materials collected pell-mell to a treatment facility outside the site for sorting.
.3 Provide a waybill of sorted waste materials.

1.14 WASTE DISPOSAL

.1 It is forbidden to bury rubbish or waste.

.2 It is prohibited to discard [waste] [volatile] [mineral spirits] [hydrocarbons] [thinner] painting] in a watercourse or in a storm sewer or health.

.3 Keep a register of construction waste, indicating the following.
.1 The number of bins and their size.
.2 The type of waste placed in each bin.
.3 The total tonnage of waste generated.

.4 The total tonnage of waste reused / reused or recycled.
.5 The destination of the waste that will be reused / reused or recycled.
.6 [_____].

.4 Recover waste materials as the deconstruction / dismantling work progresses.

.5 Prepare a project summary to control the destination and quantities of each type of waste material identified in the pre-decommissioning audit.

1.15 USE OF PLACES AND FACILITIES

.1 Execute the work with the least possible harm to the normal use of the premises.

.2 [Maintain current security measures established for the existing installation] [Implement interim safety measures approved by [Departmental Representative] [DCC Representative] [Consultant]].

1.16 SCHEDULE OF WORK

.1 Coordinate waste management with other activities to ensure an orderly flow of work.

2 PRODUCTS NOT APPLICABLE

3 EXECUTION

3.1 N/A

3.2 GENERAL

.1 Perform the work in accordance with the PRD.

.2 Handle in accordance with applicable codes and regulations waste that is not reused / reused, recycled or recovered.

3.3 CLEANING

.1 Once the work is done, remove the tools and dispose of the waste. Leave the premises clean and tidy.

.2 Clean the work area as you go.

.3 Sort waste materials that need to be reused / reused or recycled at the source and place them where indicated.

3.4 WASTE RECOVERY

.1 Based on the list below, sort waste materials from the general waste stream and dispose of them separately or in separate containers, with the approval of [Departmental Representative] [DCC Representative] [Departmental Representative]. Consultant] and in accordance with relevant fire safety regulations.
.1 Identify containers or storage areas.
.2 Provide instructions regarding disposal practices.

.2 On-site sale of waste materials [recovered for reuse] [recovered for recycling] [reusable / reusable] [recyclable] [is permitted] [is prohibited].

.3 Demolition waste

Type of materials	Recommended percentage valuation	Percentage of actual valorization
Acoustic tiles	[50]	[_____]
Acoustic materials	[100]	[_____]
Textile floor	[100]	[_____]
Removable partitions	[80]	[_____]
Doors and frames	[100]	[_____]
Electrical equipment	[80]	[_____]
Furniture	[80]	[_____]
Marble pedestals	[100]	[_____]
Mechanical equipment	[100]	[_____]
Metallic elements	[100]	[_____]
Rubble	[100]	[_____]
Wooden elements (no contaminated)	[100]	[_____]
Other_____		[_____]

.4 Construction waste

Type of materials	Recommended percentage valuation	Percentage of actual valorization
Cardboard	[100]	[_____]
Packaging in plastic	[100]	[_____]
Rubble	[100]	[_____]
Steel elements	[100]	[_____]
Wooden elements (no contaminated)	[100]	[_____]
Other _____		[_____]

3.5 AUDIT OF WASTE (AD)

1 Annex A - Waste Audit (AD)

(1) Category of materials	(2) Quantity of materials received (unit)	(3) Estimated percentage of waste	(4) Total amount of waste (unit)	(5) Generation point	(6) Percentage of recycled materials	(7) Percentage of reused materials / R éemployés
Wooden and plastic elements Description						
falls						
Warped pallets						
Plastic packaging						
Cardboard packaging						
Other						
Door and window materials Description						
Painted buildings						
Glass						
Wooden elements						
Metallic elements						
Other						

3.6 WASTE REDUCTION PLAN (PRD

.1 Appendix B

(1)	(2)	(3)	(4)	(5)	(6)
Category of materials	Responsible people	Total amount of waste (unit)	Actual Actual Quantity of Waste Recycled / Reused (unit)	Actual Actual Quantity of Recycled Waste (Unit)	Destination of materials
Wooden and plastic elements Description					
Falls / parings					
Warped pallets					
Plastic packaging					
Cardboard packaging					
Other					
Door and window materials Description					
Painted buildings					
Glass					
Wooden elements					
Metallic elements					
Other					

3.7 DEMOLITION WASTE AUDIT (ADD)

.1 Appendix C - Audit of Demolition Waste (ADD)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
S Description of materials	Amount	Unit	T otal	Volume (cumulative)	Po ids (cumulative)	Observations and hypotheses
Wooden elements						
Wooden poles						
Plywood elements						
Skirting boards - Wood						
Door joinery - Wood						
Storage furniture						
Doors and windows						
Ordinary panels						
Ordinary slabs						
Wood laminate						
Folding doors (cupboards)						
glazing						

3.8 COST-REVENUE ANALYSIS PLAN (PACR)

.1 Appendix D - Cost-Revenue Analysis Plan (CRAP)

(1)	(2)	(3)	(4)	(5)	(6)
Description o f materials	Total quantity (unit)	Volume (cumulative	Weight (cumulative)	Cost / disposal income (±) $	Subtotal by category (±) $
Wooden elements					
Wooden poles					
Plywood elements					
Skirting boards - Wood					
Door joinery - Wood					
Storage furniture				$	
Doors and windows					
Ordinary panels					
Ordinary slabs					
Wood laminate					
Folding doors (cupboards)					
glazing				$	

(7) Costs $
(-) / Incomes (+)

3.9 MAJOR ENVIRONMENTAL AUTHORITIES WITHIN THE FEDERAL AND PROVINCIAL GOVERNMENTS

.1 Appendix E - Major Government Environmental Authorities

Province	Address INFORMA General	fax machine
Quebec	Ministry of the Environment and Wildlife	418-643-3127
	The head office	418-646-59 74
	150, boul. René-Lévesque East	800-561-1616
	Quebec City, Quebec G1E 4Y1	
	Conservation Council and the Environment	418-643-38 18
	800, place d' Youville , 19th floor	
	Quebec (Quebec) G1R 3P4	

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 CSA International
.1 CSA S350-FM1980 (R2003), Code of Practice for Safety in Demolition of Structures.

.2 US Environmental Protection Agency (EPA) / Office of Water
.1 EPA 832 / R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.3 DOCUMENTS/SAMPLES SUBMITTALS/INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Submittal procedures.

.2 Not applicable

1.4 CONDITION OF IMPLEMENTATION

.1 Check the Report on Hazardous Substances and take the necessary steps to preserve the environment.

.2 If a material resembling asbestos applied by projection or trowel or other designated and classified hazardous materials is discovered during the performance of the work, suspend the latter, take the appropriate precautions and immediately notify the Representative. ministerial.
.1 Resume work only after receiving written instructions from the Departmental Representative.

.3 Notify the Departmental Representative before obstructing access to the building or interrupting services.

2 PRODUCTS

.1 Not applicable

3 EXECUTION

3.1 EXAMINATION

.1 Inspect the building with the Departmental Representative, and verify the location and extent of the items to be removed, disposed of, recovered, recycled, recovered, and those that must remain in place.

.2 Identify and protect utility lines and keep those in service on the ground in good condition.

.3 Notify utility companies and obtain necessary approvals from them prior to commencing demolition work.

.4 Disconnect, shut off or re-route, as required, existing utility lines located in the field that interfere with the performance of the work, in accordance with the requirements of the appropriate authorities. Identify the location of these pipelines and those previously abandoned in the field and indicate (horizontal and vertical planes) on the as-built drawings. Support, counteract and maintain in place the pipes and conduits encountered.

.1 Immediately notify the Departmental Representative and the relevant utility company of any damage to a service line to be retained.

.2 Immediately notify the Departmental Representative of the discovery of any unregistered utility pipework and wait for written instructions regarding action to be taken in this regard.

3.2 PREPARATORY WORK

.1 Temporary means of erosion and sediment control

.1 Establish temporary erosion and sediment control measures to prevent soil loss and to prevent deposition on adjacent properties and walkways of sediment carried by runoff or dust and particulate matter driven by wind, in accordance with the requirements of the competent authorities

.2 Inspect, maintain and repair defenses when required during demolition work.

.3 Remove the means of struggle and restore and stabilize the surfaces stirred during these works.

.2 Protection of structures in place

.1 Take the necessary measures to prevent the movement, settling or other damage to structures, utility lines and landscaping and parts of the building to be retained. Provide shoring and bracing of structures as required.

.2 Limit as much as possible the dust and noise produced by the work, as well as the inconvenience caused to the occupants of the premises.
.3 Protect mechanical and electrical appliances, systems and installations in the building and utility lines.
.4 Provide dust screens, tarpaulins, railings, support elements and other necessary protective devices.
.5 Perform the work in accordance with section 01 35 29.06 - Health and security.

.3 Demolition / removal work
.1 Remove the elements and the works indicated.
.2 Removal of hard coatings, curbs and gutters :
.1 Cut adjacent surfaces not affected by the work at a right angle using a saw or other means approved by the Departmental Representative.
.2 Protect charge transfer devices and adjacent joints.
.3 Remove the elements of the existing building to allow the realization of the new construction.
.4 Re-cut the banks of the partially demolished components of the building to the tolerances specified by the Ministerial Representative to facilitate the installation of the new elements.

3.3 CLEANING

.1 Cleaning during work carry out cleaning according to section 01 74 11 - Cleaning.
.1 Leave the places clean at the end of each working day.

.2 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with Section 01 from the work site 74 11 - Cleaning.

.3 Remove bins and recycling bins from site and dispose of materials at appropriate facilities.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 12 Masonry mortaring and grouting.
.2 Section 04 05 19 Masonry anchorage and reinforcing.
.3 Section 04 05 23 Masonry Accessories.
.4 Section 04 21 13 Brick masonry.
.5 Section 04 22 00 Concrete unit masonry.

1.2 REFERENCES

.1 Not applicable

.2 Canadian Standards Association (CSA) / CSA International
  .1 CSA-A165 Series-F04 , CSA Standards for Concrete Masonry Units .
  .2 CSA A179- F04, Mortar and Grout for Masonry.
  .3 CSA-A371-F04 , Masonry of Buildings.

.3 International Masonry Industry All-Weather Council (IMIAC)
  .1 Recommended Practices and Guide Specification for Masonry Construction.

1.3 ADMINISTRATIVE TERMS

.1 Meeting prior to the implementation one (1) week before the start of work for this Section and installation work on site, a meeting at which will be discussed:
  .1 the requirements of the work, including the requirements for the samples of the work;
  .2 the state of the support (s);
  .3 the proposed products, techniques and methods of implementation;
  .4 coordinating work with those carried out under related sections;
  .5 coordination of work with those performed by other trades;
  .6 the manufacturer's instructions for implementation;
  .7 masonry cutting techniques and tools and protective measures that workers must take to protect themselves from dust during construction;
  .8 the terms of the guarantee (s).

.2 Work Scheduling: Follow manufacturer's recommendations for scheduling operations.

1.4 DOCUMENTS / SUBMITTALS FOR APPROVAL

. 1 Not applicable

.2 Data sheets
  .1 Submit the required data sheets as well as the manufacturer's specifications and documentation. The data sheets must indicate the characteristics of the products, the performance criteria and the colors.
  .2 Submit two (2) copies of Material Safety Data Sheets (MSDS) required under WHMIS (Workplace Hazardous Materials Information System).

.3 Samples
.1 Submit the samples indicated below.
.1 Four (4) samples of each type of prescribed brick, including any special shaped items, and any other special items mentioned in the sections.
.2 Two (2) samples mortar and grout, hardened and colored, showing the color and color range of the materials, and any other particular material mentioned in the section 04 05 12 - Masonry mortaring and grouting .
.3 Two (2) samples of each prescribed type of masonry fixtures and flashings, and any other special items mentioned in section 04 05 23 - Masonry accessories.
.4 Two (2) samples of each proposed type of masonry reinforcement, connectors and anchors, and any other special element mentioned in section 04 05 19 - Masonry anchorage and reinforcing.
.5 Samples: used for testing purposes and constituting the reference standard, once accepted.

.4 Shop drawings
.1 The submitted shop drawings must bear the seal and signature of a qualified engineer recognized or licensed to practice in Canada, in the province of Quebec.
.2 The shop drawings must indicate the details of the required temporary bracing, which must be designed to withstand wind and lateral loading over the course of the work.

.5 Certificates: submit the documents provided by the manufacturer, certifying that the products, materials and materials comply with the prescribed requirements.

.6 Test reports and evaluation reports
.1 Not applicable
.2 The test reports must certify that the masonry units and the mortar ingredients meet the requirements for physical characteristics and performance criteria.
.3 In addition to the data specified in referenced CSA and ASTM standards, submit data regarding the initial rate of water absorption (suction) of masonry.

.7 Manufacturer's Reports: provide written reports prepared by the manufacturer's personnel on site, including the documents listed below.
.1 Reports on the conformity of the work with the requirements of the contract.
.2 Reports of site visits giving details of implementation work and works completed.

1.5 DOCUMENTS / ITEMS TO BE GIVEN TO ACH E COMPLETION OF WORK

.1 Submit manufacturer's instructions for the care, cleaning and maintenance of glazed masonry units.

1.6 MATERIALS / ADDITIONAL MATERIALS

.1 Provide the manufacturer's instructions which must specify the requirements for the maintenance of the works, as well as a catalog of parts with cuts and identification numbers.

1.7 QUALITY CONTROL

.1 Qualification
- .1 Manufacturer: capable of on-site representation during construction and approval of the method of implementation.
- .2 Installer: Experienced and specialized in the performance of work similar to that in this section.
- .3 Masons: a company or person specialized in masonry work, with five (5) years of experience, references in support, in projects similar to the one covered by this section.
  - .1 Masons working in this project must be able to produce works that meet the quality standards defined by the samples of the book.
  - .2 Samples of the book
    - .1 Construct the samples of the required work.
    - .2 Construct a 1200 mm x 1800 mm masonry exterior wall sample panel showing the colors and textures of the masonry as well as the details of reinforcement, fasteners, flashings, weeps and mortar joints, as well as the type of apparatus and seating and the quality of execution of the work.
    - .3 The samples will be used for the following purposes:
      - .1 evaluate the workmanship of the work, the preparation of the support, the operation of the equipment and the implementation of the materials.
      - .2 In order to verify the conformity of the elements with the prescribed performance requirements, perform the tests below.
        - .1 In the case of clay elements, in addition to the tests specified in the referenced CSA and ASTM standards, perform the tests to determine their initial absorption rate.
    - .4 Make the sample of the book in the place indicated by the Ministerial Representative.
    - .5 Allow 24 hours for the Departmental Representative to review the sample before proceeding.
    - .6 Once accepted by the Departmental Representative, the sample of the work will be the minimum standard to be met for the work in this section. It can not be part of the finished work.
    - .7 Do not begin work until the sample of the work has been accepted in writing by the Ministerial Representative.

1.8 TRANSPORT, STORAGE AND HANDLING

.1 Not applicable

.2 Transport, store and handle materials and equipment according to the instructions manufacturer's written.

.3 Protective measures for storage and handling
- .1 Keep materials dry until they are put into use, except when it is prescribed that the elements should be wet.
- .2 Store materials under waterproof covers, on pallets or on platforms placed on planks or planks, so that they do not rest directly on the ground.

1.9 CONDITIONS OF IMPLEMENTATION

.1 Ambient conditions: Only assemble and install the elements when the temperature is above 5 degrees Celsius.

.2 Work performed in hot or cold weather: in accordance with CAN / CSA A371, the document entitled "Recommended Practices and Guidelines for Hot and Cold Weather Masonry Construction" Published by IMIAC.

.3 Implementation in cold weather
- .1 As per the requirements of CSA-A371 and the requirements listed below.
  - .1 Maintain the mortar at a temperature between 5 and 50 degrees Celsius, until the use or stabilization of the mix.
  - .2 Maintain masonry and its constituent materials at a temperature between 5 and 50 degrees Celsius and protect against wind chill.
  - .3 Maintain masonry above freezing for at least seven (7) days after mortar placement.
  - .4 Preheat in enclosures, up to a temperature above 10 degrees Celsius, unheated wall sections at least 72 hours prior to mortar placement.
- .2 Implementation in hot weather
  - .1 Cover with a waterproof tarpaulin, which does not stain, masonry works freshly made so that they do not dry too quickly.
  - .2 As long as the masonry work is not completed or protected by flashing or any other permanent construction, keep it dry with impervious tarpaulins that do not stain, which will extend beyond the top and sides of the walls. works a sufficient distance to protect them from wind-driven rain.
  - .3 Spray mortar surfaces at regular intervals to keep them moist for at least three (3) days after installation.

1.10 WARRANTY

.1 In the case of the work covered by this section, the warranty period is 12 months from the date of substantial completion of the work .

2 PRODUCTS

2.1 MANUFACTURERS

.1 Ensure that the manufacturer has a minimum of five (5) years of experience in the fabrication of components with characteristics similar to or greater than those required for this work.

2.2 MATERIALS
- .1 Masonry materials are prescribed in the sections referred to in section Related Sections.
  - .1 Section 04 21 13 Brick Masonry
  - .2 Section 04 22 00 Concrete unit masonry

3 EXECUTION

3.1 INSTALLERS

.1 Work on the installation and assembly of masonry structures must be carried out by qualified and experienced masters .

3.2 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with the manufacturer's written specifications, including technical bulletins and implementation instructions specified in product catalogs and packaging cartons, as well as the specifications in the data sheets.

3.3 EXAMINATION

.1 Examine the condition of surfaces, supports and structures intended to receive masonry.

.2 Examine openings for masonry units; check their dimensions, their location. Make sure that they are plumb, square, ready to receive the works provided for in this section.
- .1 Inform the Ministerial Representative immediately of any unacceptable conditions found.
- .2 Start the implementation work only after the problems have been remedied and have received the written approval of the Departmental Representative.

.3 Verification of conditions
- .1 Check the following.
  - .1 Before proceeding with the erection of brick masonry and concrete elements, ensure that the condition of supports previously erected under other sections or contracts are acceptable and allow the work to be carried out in accordance with the manufacturer's instructions.
  - .2 Ensure that existing conditions are acceptable and allow for the completion of the work.
  - .3 Make sure that the built-in elements are in the right places and ready to be incorporated into the masonry.
- .2 The fact starting work means that the state media was satisfactory.

3.4 PREPARATORY WORK

.1 Surface Preparation: Prepare surfaces according to manufacturer's written recommendations.

.2 Determine lines, levels and type of seating, and take the necessary steps to meet them.

.3 Protect against damage and deterioration works in the vicinity of work performed under this section.

3.5 GENERAL

.1 Unless otherwise specified, perform masonry work in accordance with CSA-A371.

.2 Construct masonry plumb, level and alignment structures by making vertical seams aligned and within the construction tolerances defined in CSA-A371.

.3 Arrange the rows of masonry elements according to the prescribed apparatus and in such a way as to obtain seats of appropriate height and to maintain the continuity of the apparatus above and below the bays, by cutting a minimum number of elements.

3.6 IMPLEMENTATION

.1 Exposed masonry structures
.1 Remove chipped, cracked or otherwise damaged items from exposed materials in accordance with CSA A-165, and replace with items in good condition.

.2 Pointing
.1 When concave joints are prescribed, allow the mortar to harden just enough to remove excess water, and then pass a round-face mirror to make smooth, compressed and evenly concave joints.
.2 When scraped joints are prescribed, allow the mortar to harden just enough to remove excess water, and then scrape the joints with a flat mirror to compress the mortar and smooth surface joints. , of uniform depth of 6 mm .
.3 Flush all concealed or coated wall joints, tiles, insulation or any other similar material with the exception of paint or similar thin finish.
.4 The joints must be the same thickness in both directions as the existing structure.

.3 Cut
.1 Cut masonry units where they are required to install switches, outlets or other recessed or recessed elements.
.2 Make clean cuts, square and free of uneven edges.

.4 Housing
.1 Build in items to be incorporated in masonry structures.
.2 Prevent recessed elements move during construction. As work progresses, frequently check the plumb, alignment and position of these elements.
.3 Counter door jambs so that they stay upright. Fill the spaces separating the masonry with the amounts of mortar.

.5 Mooring bricks
.1 Except in cold weather, wet bricks whose initial absorption rate exceeds 1 g / min per area of 1000 mm²; wet these bricks to a uniform degree of saturation, three (3) to 24 hours before application, and do not apply until their faces are dry.
.2 After an interruption of the work, wet the top of the walls made of bricks requiring an anchorage.

. 6 Support elements
.1 Where grout- filled elements are required instead of solid elements, use grout that complies with CSA A179.
.2 Lay construction paper under the voids to be filled with concrete, placing the construction paper 25 mm back from the face of the elements.

.7 Masonry movement
.1 Leave a space of 3 mm under the support brackets.
.2 Leave a space of 6 mm between the frame members and the top of the partitions and non-loadbearing walls; do not insert shims.
.3 Construct the masonry structures so as to incorporate stabilizers and provide, before the implementation of the latter, the vertical movement of the masonry.

.8 Steel lintels not secured (reported)
.1 Install non-integral steel lintels over the bays; center them in relation to the width of the latter.

.9 Splitting Joints
.1 Make continuous fractionation joists as indicated.

.10 Motion seals

.1 Make continuous motion joints, as indicated.

.11 Not applicable

3.7 TOLERANCES OF IMPLEMENTATION

.1 The tolerances given in the notes to CSA-A371 apply.

3.8 QUALITY CONTROL ON SITE

.1 On-site testing / Inspection
.1 Perform inspection and field tests.
.2 Notify the appropriate agency 24 hours in advance when testing is required.

.2 On-site inspections by the manufacturer
.1 Arrange for the manufacturer of the products supplied under this section to review the work related to the handling, installation / application, protection and cleaning of, and to submit Written reports, in an acceptable format, that will make it possible to verify if the work was done according to the terms of the contract.
.2 On-the-spot checks by the manufacturer: the manufacturer shall make recommendations as to the use of the product (s) and make periodic visits to verify whether the implementation has been carried out in accordance with his recommendations.
.3 Obtain inspection reports in all three (3) days following the site visit, and submit them immediately to the Ministerial Representative.

3.9 CLEANING

.1 Carry out cleaning work in accordance with Section 01 74 11 - Cleaning.

.2 Cleaning during work: according to the requirements of the relevant masonry sections.

.3 **The bricklayer must return one year after the date of substantial completion of the work to clean the masonry where efflorescence has left marks on the brick walls. This is at the expense of the Contractor and must be included in his bid.**

. 4 Final cleaning
- .1 When the work is complete, proceed with site cleanup to remove accumulated dirt and debris from construction and the environment.
- .2 After completion of the work and performance check, remove excess materials and equipment, waste, tools and safety barriers from the work site.

3.10 PROTECTION OF FINISHED WORKS

.1 Temporary bracing
- .1 Temporarily reinforce masonry structures to support them during and after construction, until the permanent framework provides proper bracing.
- .2 The bracing must be approved by the Ministerial Representative.
- .3 Brace masonry walls necessary for them to withstand wind loads and lateral forces during the construction work.

.2 Protection against moisture
- .1 As long as the masonry work is not completed or protected by flashing or any other permanent construction, keep it dry with impervious tarpaulins that do not stain, which will extend beyond the top and sides of the walls. works a sufficient distance to protect them from wind-driven rain.
- .2 At the end of each working day, cover the partially or completely finished structures with impermeable sheets securely fastened, which are not protected by an enclosure or shelter.
- .3 Protect works to maintain the ambient temperature recommended in article 1.10 CONDITIONS OF IMPLEMENTATION.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 Common work results for masonry
.2 Section 04 05 19 Masonry anchorage and reinforcing
.3 Section 04 05 23 Masonry Accessories.
.4 Section 04 21 13 Brick masonry.
.5 Section 04 22 00 Concrete unit masonry.

1.2 REFERENCES

.1 Green Building Council of Canada (CaGBC applicable)

. 1 LEED Canada-NC, Version 1.0-2004, Leadership in Energy and Environmental Design : Green Building Evaluation System for New Buildings and Major Renovations (Reference Kit) (including Addendum 2007).
.2 LEED-CI Version 1.0- 2007, LEED (Leadership in Energy and Environmental Design) : Sustainable building evaluation system for the interior design of commercial spaces.

.2 Canadian Standards Association (CSA) / CSA International
.1 CAN / CSA-A23.1 / A23.2-04 , Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete.
.2 CAN / CSA A179-F04, Mortar and Grout for Masonry.
.3 CAN / CSA A371-04, Building Masonry.
.4 CAN / CSA-A3000-F03, Compendium of Raw Materials; CAN / CSA-A3002-F03, Masonry cement.

.3 South Coast Air Quality Management District (SCAQMD), California State (SCAQMD)
.1 SCAQ® Rule 1168-05, Adhesives and Sealants Applications.

1.3 DOCUMENTS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Data sheets
.1 Submit the required documents in accordance with Section 01 33 00 - Documents and samples to be submitted.
.2 Submit the required data sheets as well as the manufacturer's specifications and documentation. The data sheets must indicate the characteristics of the products, the performance criteria and the limits.
.3 N/A

.2 Samples
.1 Samples: provide the required samples in accordance with the requirements of section 04 05 00 - Common work results for masonry concerning the results of the work as well as those indicated below.
.1 SO
.2 Before mixing or preparing mortars, provide the Departmental Representative with a confirmation of the source of supply or the product data sheets listed below.
.1 Aggregates: coarse aggregates and sand.
.2 Cement.
.3 Lime.
.4 Pigments of colors.

.3 Manufacturer's instructions
.1 Submit implementation instructions provided by the manufacturer.

.4 N/A

1.4 QUALITY ASSURANCE

.1 Test reports: according to the prescriptions of section 04 05 00 Common work results for masonry concerning the results of the work and to those indicated below, submit test reports certifying that the products, materials and equipment meet the requirements regarding physical characteristics and performance criteria.

.2 Certificates: submit documents signed by the manufacturer, certifying that the products, materials and equipment meet the requirements regarding physical characteristics and performance criteria.

.3 N/A

.4 Samples of the book
.1 Make the samples of the structure according to the prescriptions of section 04 05 00 - Common work results for masonry.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle mortar and masonry grout and constituent materials in accordance with the requirements listed below.
.1 Deliver dry, premixed mortar materials at the work site in plastic lined bags, each bearing the manufacturer's name and address, production code, and batch number, as well as the numbers color and formula.
.2 Keep mortar, grout and pre-packaged materials dry and in a clean place, protect them from moisture, frost, traffic and contamination from foreign materials.

.2 Packaging Waste Management: recover packaging waste for reuse in accordance with Section 01 74 21 - Management and elimination of construction / demolition waste.

1.6 CONDITIONS OF IMPLEMENTATION

.1 Ambient conditions: maintain materials and atmosphere at the temperatures indicated below.
- .1 At least 5 degrees Celsius before and during the work and for a period of 48 hours after the completion of the work.
- .2 Not more than 32 degrees Celsius before and during the work and for a period of 48 hours after the completion of the work.

2 PRODUCTS

2.1 MATERIALS

.1 Materials of the same brand and aggregates from the same source must be used for all work. Cementitious materials, sand and colorants if required will be premixed at the factory and then mixed with water on site to obtain the properties described on the manufacturer's data sheets for each type of mortar and grout, in accordance with the CAN / CSA standard. A179.

.2 Cement
- .1 Portland cement: CAN / CSA-A3000 standard, type GU - normal or general purpose hydraulic cement (type 10) of **color such as the adjacent existing work.**
  - .1 Low VOC product.
- .2 Masonry cement: in accordance with CAN / CSA-A3002 standard and the CAN / CSA A179, N-type.
- .3 Mortar cement: complies with CAN / CSA-A3002 and CAN / CSA A179, Type N.
  - .1 Low VOC product.
- .4 Premixed dry materials, in bag, for mortar: in accordance with CAN / CSA A179, type N] [S], with gray cement.

.3 Aggregates: from a single source of supply.
- .1 Fine aggregates: conform to CAN / CSA A179.
- .2 Coarse aggregates: in accordance with CAN / CSA A179.

.4 Water: clean and drinkable.

.5 Lime
- .1 N/A
- .2 Hydrated Lime: complies with CAN / CSA A179, Type S.

.6 Bonding product: based on epoxy.

.7 Polymer latex: latex based on organic polymer.

2.2 COLORING AGENTS

.1 Use coloring agents in an amount not exceeding 10% of the mass cement content, or colored masonry cement, to obtain colored mortar corresponding to the approved sample. Staining agents must be approved before use. Incorporate according to the manufacturer's recommendations.

.2 N/A
.3 N/A

2.3 BUILDERS

.1 Water repellent agents:
.1 Low VOC products, meeting the requirements of SCAQMD regulation 1168.
.2 N/A

2.4 MORTAR

.1 Mortar for exterior masonry structures, above ground level
.1 Mortar used in the case of load-bearing walls: type S, prepared according to property- based specifications.
.2 Mortar used in the case of non-load bearing walls: N type, prepared according to property-based specifications.

.2 Mortar for interior masonry work
.1 Mortar used in the case of load-bearing walls: Type S, prepared according to property-based specifications.
.2 Mortar used in the case of non-load bearing walls: type O or N, prepared according to property- based specifications.

.3 N/A

.4 Grouting mortar: in accordance with CAN / CSA A179, Type N, prepared according to properties-based specifications.

.5 N/A

.6 N/A

.7 N/A

.8 Mortar plastering: N type, conforming to CSA A179.

.9 Mortar for foundation walls, manholes, sewers, pavements, sidewalks, decks and other exterior masonry structures, at or below ground level: Type M mortar, prepared to specifications based on the properties.

.10 The following requirements apply, regardless of the types of mortar and the destinations mentioned above.
.1 Mortar for bricks made of calcium silicate bricks or concrete bricks: type O, prepared according to specifications based on the dosage.

.2 Mortar fabricated masonry stones: N-type salt is prepared specifications oriented properties.
.3 Mortar for reinforced masonry structures grouted: type S, prepared according to property-based specifications .

2.5 MIXING OF MORTAR

.1 Use premixed, precolored and prepackaged mortar at the factory under controlled conditions. The accuracy of the assay should be of the order of 1 percent.

.2 Mix the mortar ingredients in accordance with CAN / CSA A179 in quantities needed for immediate use.

.3 Moisten the sand evenly before mixing the components.

.4 Add pigments according to the manufacturer's instructions. Ensure uniformity of mixing and coloring.

.5 Do not use anti-freeze compounds, especially calcium chloride or other chloride-based compounds.

.6 Do not add air entrainers to the mixture.

.7 Use a mixer in accordance with CAN / CSA A179.

.8 Pre-moisten the grout by first kneading the dry ingredients and then adding just enough water to obtain a hard-to-handle wet mass, which keeps its shape when made into a ball. Let stand for at least one (1) hour but not more than two (2) hours and then knead again into adding enough water to obtain consistency mortar suitable for grouting.

9 Regenerate the mortar only two (2) hours after mixing in case of loss of water by evaporation.

.10 Use the mortar within two (2) hours after mixing when the temperature is 32 degrees Celsius, or within two (2) hours if it is less than [5] [10] degrees Celsius.

2.6 GROUT

. 1 Grout: compressive strength of at least 12.5 MPa at 28 days. The maximum aggregate size and slump of the material must be in accordance with CAN / CSA A179.

2.7 MIXING THE GROUT

.1 Mix premixed grout according to CAN / CSA-A23.1.

.2 Mix the [fine grain] [coarse grain] grout components in quantities required for immediate use in accordance with CAN / CSA A179.

.3 Add the additives according to the manufacturer's instructions and mix thoroughly.

.4 Do not use additives based on calcium chloride or other chlorides.

2.8 MORTAR AND GROUT TESTING

.1 Mortar test

.1 Try the pr separates mortar to specification-based property s under the CAN / CSA A179. The tests must be carried out before the construction works and they must relate to the following.

.1 Compressive strength.
.2 Consistency.
.3 Aggregate content.
.4 Sand / cement ratio.
.5 Water content and water / cement ratio.
.6 Air content.
.7 Tensile strength by splitting.

.2 Grout test

.1 Try the sauce prepared according to specifications focused on properties in accordance with CAN / CSA A179. The tests must be carried out before the construction works and they must relate to the following.

.1 Compressive strength.
.2 Sand / cement ratio.
.3 Water content and water / cement ratio.
.4 Sagging.

3 EXECUTION

3.1 EXAMINATION

.1 Request that spaces be inspected where grout is to be injected.

3.2 PREPARATORY WORK

.1 Apply a bonding agent to existing [concrete] surfaces.

.2 Seal the cleaning eyes with bricks. Counteract masonry work before injecting grout under pressure.

3.3 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with the manufacturer's written requirements, recommendations and specifications, including the technical bulletins and installation instructions specified in the product catalogs and packaging cartons, and the specifications in the data sheets.

3.4 IMPLEMENTATION

.1 Unless otherwise specified, use mortar and masonry grout in accordance with CAN / CSA A179.

.2 Apply plastering mortar in uniform layers totaling at least 10 mm thick.

3.5 MIXING

.1 All grouting mortars can be kneaded in an ordinary paddle mixer. Only electric motor mixers are eligible; those with hydrocarbon engines are not allowed because of the emissions they emit. Mixing by hand must be pre-authorized by the Ministerial Representative.

.2 Clean mixing boards and mechanical mixers between each fill.

.3 The prepared mortar must have less resistance than the masonry elements to be bonded.

.4 Designate a person who will be assigned to mix the mortar for the duration of the work. If another person is needed during work, stop mixing until the new worker is trained and the mixture has been tested.

3.6 IMPLEMENTATION OF THE MORTAR

.1 Implement the mortar in accordance with CAN / CSA A179.

3.7 IMPLEMENTATION OF THE COULIS

.1 Apply grout according to the manufacturer's instructions.

.2 Apply grout in accordance with CAN / CSA A179.

.3 Grout the cavities into the cavities of the masonry structures to eliminate all voids.

.4 Do not apply the grout in layers over [400] mm thick without consolidating the mass by shaking with a rod.

.5 Avoid moving the rebar when grouting.

3.8 O THE CONTROL OF QUALITY

.1 Field tests / Inspection: according to the requirements of section 04 05 00 - Common work results for masonry and those given below.
  .1 Test and evaluate the mortar prior to construction work in accordance with CAN / CSA A179.
  .2 Try and E valuation grout av ing construction, in accordance with CAN / CSA A179; perform the tests in accordance with the requirements specified in the specified sections for the various masonry elements.

.2 On-the-spot checks by the manufacturer: according to section 04 05 00 - Common work results for masonry.

3.9 CLEANING

.1 Upon completion of the work, remove surplus materials, waste materials, tools and safety barriers from the site.

.2 Remove burrs and splashes of mortar with a clean sponge and water.

.3 Clean the masonry with a soft bristle brush made of natural fibers and clean water at low pressure.

.4 Waste management: sort waste according to section 01 74 21 - Management and disposal of construction / demolition waste.

3.10 PROTECTION OF FINISHED WORKS

.1 At the end of each working day, cover with impermeable sheets partially or completely completed works, which are not protected by an enclosure or shelter. Secure the tarpaulins in place
.1 Mortar
.1 Mortar for brick masonry.
.2 Mortar for masonry of concrete elements.

3.11 LISTS AND TABLES

N/A

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 Common work results for masonry
.2 Section 04 05 12 Masonry mortaring and grouting.
.3 Section 04 05 23 Masonry Accessories.
.4 Section 04 21 13 Brick masonry.
.5 Section 04 22 00 Concrete unit masonry.

1.2 REFERENCES

.1 ASTM International Inc.
- .1 ASTM AT 36 / A 36M-05, Standard Specification for Carbon Structural Steel.
- .2 ASTM AT 82 / A 82M-05a, Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- .3 ASTM AT 167-99 (R2004), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .4 ASTM AT 307-04, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .5 ASTM AT 580 / A 580M-06, Standard Specification for Stainless Steel Wire.
- .6 ASTM AT 641 / A 641M-03, Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
- .7 ASTM-A666-03, Standard Specification for Annealed or Cold-Worked Stainless Steel Sheet, Strip, Plate, and Flat Bar.

.2 Green Building Council of Canada (CaGBC)
- .1 LEED Canada-NC, Version 1.0-2004, Leadership in Energy and Environmental Design: Green Building Evaluation System for New Construction and Major Renovations (Reference Package) (including Addendum 2007).
- . 2 LEED Canada-CI, version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Sustainable building evaluation system for the interior design of commercial spaces.

.3 Canadian Standards Association (CSA) / CSA International
- .1 CAN / CSA-A23.1 / A23.2-F04, Concrete - Materials and Construction / Methods of Test and Standard Practices for concrete.
- .2 CAN / CSA-A179 F04, mortar and grout for fat masonry.
- .3 CAN / CSA A370-F04, Connectors for Masonry.
- .4 CAN / CSA A371- F 04, Masonry Construction for Buildings.
- .5 CAN / CSA G30.18-FM92 (C2007) , Billet steel bars for reinforcing concrete.
- .6 CSA-S304.1-04, Design of Masonry Structures.
- .7 CSA W186-FM1990 (C2007), Welding Reinforcing Bars in Reinforced Concrete Structures.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit documents and samples according to section 01 33 00 - Documents and samples to be submitted.

.2 Data sheets
.1 Submit the required data sheets as well as the manufacturer's specifications and documentation for the products to be used in this work.
.2 Submit two (2) copies of Material Safety Data Sheets (MSDS) required under WHMIS (Workplace Hazardous Materials Information System) in

.3 Shop drawings
.1 Submit shop drawings in accordance with the will section 01 33 00 - Documents and samples to be submitted.
.1 Submitted shop drawings must bear the seal and signature of a qualified engineer recognized or licensed to practice in Québec.
.2 Shop drawings must include the details of anchors, classifications and implementation of drawings elements.
.3 The placing drawings shall indicate the number of reinforcement elements and connectors required and the dimensions, spacing and location of these parts.

.4 Samples
.1 Submit the required samples according to the requirements of section 01 33 00 - Documents and samples to be submitted and those indicated below.

.5 Manufacturer's instructions
.1 Submit installation instructions provided by the manufacturer.

1.4 QUALITY ASSURANCE

.1 Test reports: submit test reports certifying that products, materials and equipment meet the requirements for physical characteristics and performance criteria.

.2 Certificates: submit documents signed by the manufacturer, certifying that the products, materials and equipment meet the requirements regarding physical characteristics and performance criteria.

.3 Pre-Implementation Meeting: Hold a meeting to review the requirements of the work, the manufacturer's instructions for installation, and the terms of the warranty offered by the manufacturer. Comply with section 04 05 00 - Masonry - General requirements for the results of the work.

.4 Samples of the book
.1 Construct samples of the required structure as specified in Section 04 05 00 - Common work results for masonry, as well as those indicated below.
.1 Create a sample panel showing the installation details of the anchors used reinforcements used in the masonry work.
.2 Sample panel: 3000 mm x 3000 mm, made with reinforcements, connectors and anchors and according to the methods and the quality of execution proposed.

1.5 MEASUREMENT ON SITE

.1 Take the necessary measures on site to ensure an appropriate adjustment of the elements implemented.

1.6 TRANSPORT, STORAGE AND HANDLING

1 Transport, store and handle reinforcements, connectors and masonry anchors in accordance with the manufacturer's instructions.
.1 Deliver reinforcement, connectors and anchors identified on shop drawings and installation drawings.

2 PRODUCTS

2.1 MATERIALS

.1 Reinforcing bars for concrete block: in stainless steel according to ASTM standard AT 167. Complies with CAN 3-A371-04.
.2 Triangulated armature made of stainless-steel wires 3.7 mm in diameter and 0.02 mm thick.

Provide the required sections for straight walls, corners, "L" and "T" fittings.
.3 Folded, stainless steel anchor for block partitioning to concrete walls. Part 3.18 mm thick, 31.7 mm wide and of sufficient length to penetrate at least 75 mm into the masonry.
.4 Folded metal anchor, stainless, for installation at the base of walls and partitions. Part 3.2 mm thick, 50 mm wide and 150 mm high.

.5 Connectors: Compliant with CAN / CSA A370 and CSA-S304.1.

.6 Corrosion protection: in accordance with CSA-S304.1, galvanizing according to CSA-S304.1 and CAN / CSA A370 standards.

.7 Fastening devices: installed after construction.
.1 Screw plugs and plugs: of the type appropriate for the type of work.
.2 Screws and bolts: type and size suitable for application, arranged as indicated.
.3 Nails: corrugated or cemented steel, type and size suitable for application.

.4 Not applicable
.5 Adhesives: epoxy putty, plastic putty or contact adhesive, designed for use with fasteners, in accordance with the manufacturer's recommendations.

.8 Fasteners: hot dipped galvanized steel to CAN / CSA A370, Table 5.2.
.1 Corrugated brackets: to CAN / CSA A370.
.2 Non-continuous fasteners: according to CAN / CSA A370, depending on the type of work
.3 Adjustable fasteners: to CAN / CSA A370 standard, registered trademark, type, style and size suitable for application and in accordance with manufacturer's recommendations such as Guy Guenette's Series 312 or approved equivalent
.4 Joint fittings: according to CAN / CSA A370.
.1 Not applicable
.2 Not applicable

.9 Not applicable

.10 Not applicable

.11 Not applicable

2.2 SHAPING

.1 The reinforcements shall be shaped in accordance with the requirements of CAN / CSA-A23.1 and the Reinforcing Steel Manual of Standard Practice, published by the Reinforcing Steel Institute of Canada.

.2 Connectors and anchors must be shaped in accordance with CAN / CSA A370.

.3 The location of the joints between the reinforcements, other than those shown on the placing drawings, must be approved by the Ministerial Representative.

.4 Subject to approval by the Departmental Representative, the reinforcement shall be welded in accordance with the requirements of CSA W186.

.5 Prior to dispatch, reinforcements, connectors and anchors shall be clearly marked as shown in the drawings.

2.3 CONTROL OF QUALITY ON PLACE

.1 Not applicable

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Comply with manufacturer's written recommendations, including any available technical bulletins, instructions for handling, storing and implementing products, and data sheet instructions.

3.2 PREPARATORY WORK

.1 Provide supervision and coordination of the installation work of masonry metal anchors provided under other sections.

3.3 INSTALLATION

.1 Unless otherwise specified, provide and install reinforcing bars, connectors and anchors in accordance with the requirements of CAN / CSA A370, CAN / CSA A371, CAN / CSA-A23.1 and CSA-S304.1.

.2 Get approval of the Consultant regarding the location of reinforcement, connectors and anchors prior to concrete placement.

.3 Provide additional reinforcement and install in masonry as indicated.

3.4 FIXING AND CONNECTION

.1 Bond walls of two or more walls with metal connectors and anchors in accordance with CSA-S304 and CAN / CSA A371 and as indicated.

.2 Fasten the masonry veneers to the substrate in accordance with the National Building Code (NBC), CSA-S304.1 and CAN / CSA A371 and as indicated.

.3 Install adjustable non-continuous reinforcement for single wall and multiwall wall joints as indicated and in accordance with CAN / CSA A370 and CAN / CSA A371 as per manufacturer's instructions.
- .1 Reinforce single wall or multiple walls by means of connectors in metal accordance with CAN / CSA A371 and as indicated.
- .2 Lay reinforcements in the horizontal joints at 400 mm oc.
- .3 Lay reinforcement in the first horizontal joint located above and below each bay and extend these over a length of 400mm on either side of the bay.
- .4 Lay continuous reinforcement in the first joint below the top of the walls.
- .5 Overlap the ends of the reinforcements over a length of at least 150 mm.
- .6 Reinforce corners and the intersections of work stretcher bond via an anchoring tabs arranged at 400 mm centers.

3.5 STRUCTURAL LINTELS AND MASONRY BEAMS

.1 Structural lintels and masonry beams as well as bonding beams as indicated.

.2 Install reinforcing bars and grout in accordance with the requirements of CSA-S304.1, CAN / CSA A371 and CAN / CSA A179.

.3 Arrange the reinforcing bars and support them in accordance with CAN / CSA A371.

3.6 GROUT INJECTION

.1 Inject the grout into the masonry in accordance with CSA-S304.1, CAN / CSA A371 and CAN / CSA A179 and as indicated.

3.7 INSTALLATION OF ANCHORS

.1 Provide and install metal anchors in accordance with CAN / CSA A370 and CAN / CSA A371 and as indicated.

3.8 INSTALLATION OF ANCHORS AND SIDE SUPPORTS

.1 Provide and install anchors and side supports in accordance with CSA-S3 04.1 and as indicated.

3.9 FRACTIONAL JOINTS

.1 Unless otherwise specified, no continuous reinforcement shall pass through a splitting joint.

3.10 FOLDING EXECUTED ON SITE

.1 Reinforcing bars, connectors and anchors must not be bent or folded on site, unless specifically indicated in this regard or with the express authorization of the Departmental Representative.

.2 When on-site bending is allowed, proceed without heat supply, slowly applying uniform pressure.

.3 Replace rebars, connectors and split or cracked anchors.

3.11 QUALITY CONTROL

.1 Carry out surface inspections in accordance with section 04 05 00 - Common work results for masonry.

.2 Have the location of reinforcement, connectors and anchors approved by the Departmental Representative.

3.12 EXECUTION OF RETOUCHES ON PLACE

.1 Retouch cut or damaged ends of galvanized or epoxy coated reinforcements, connectors and anchors with a compatible finish to ensure continuity of their protective coating.

3.13 CLEANING

1 Carry out cleaning work in accordance with Section 01 74 11 - Cleaning.
.1 Remove surplus materials / equipment, waste, tools and equipment from site.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 Common work results for masonry
.2 Section 04 05 12 Masonry mortaring and grouting.
.3 Section 04 05 19 Masonry anchorage and reinforcing.
.4 Section 04 21 13 Brick masonry.
.5 Section 04 22 00 Concrete unit masonry.

1.2 REFERENCES

.1 ASTM International Inc.
  .1 ASTM D 2240-05, Standard Test Method for Rubber Property - Durometer Hardness.

.2 Green Building Council of Canada (CaGBC)
  .1 LEED Canada-NC, Version 1.0-2004, Leadership in Energy and Environmental Design: Green Building Evaluation System for New Construction and Major Renovations (Reference Package) (including Addendum 2007).
  .2 LEED Canada-CI, version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Sustainable building evaluation system for the interior design of commercial spaces.

.3 Canadian Standards Association (CSA) / CSA International
  .1 CAN / CSA A371 -F04, Building Masonry.
  .2 CAN / CSA-ISO 14021-00 (C2204), Environmental Markings and Declarations - Self-Reporting (Type II Labeling).

.4 South Coast Air Quality Management District (SCAQMD), California State (SCAQMD)
  .1 SCAQMD Rules 1168 -05, Adhesives and Sealants Applications.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples for approval in accordance with Section 01 33 00 - Documents and samples to be submitted.

.2 Data sheets
  .1 Submit the required data sheets as well as the manufacturer's specifications and documentation. The data sheets must indicate the characteristics of the products, the performance criteria and the limits.

.3 Shop drawings
  .1 Submit shop drawings required in accordance with Section 01 33 00 - Documents and samples to submit.
    .1 Submitted shop drawings must bear the seal and signature of a qualified engineer recognized or licensed to practice in Québec.

.2 The drawings must indicate the details of the flashings and the related installation method. They must also indicate the number, size, spacing and location of fasteners.

.4 Samples

.1 Submit the required samples according to the requirements of section 01 33 00 - Documents and samples to be submitted and those indicated below.

.1 Materials: two (2), hardened samples showing the color of the elements listed below.

.1 Bottom of joint for splitting joints.
.2 Adhesive for lap joints.
.3 Mechanical fastening devices.
.4 Strips of engraving.
.5 Brick masonry wall vents.

.2 Two (2) samples of the moisture control devices shown below, showing the color and color range, dimensions and shape of the devices.

.1 Weep holes.
.2 Mortar Burr Deflectors.
.3 Grout retaining mesh.

.3 Two (2) sample s types flashings indicated below, showing the color and range of colors, size and shape thereof.

.1 Metal flashing.
.2 Composite flashing.
.3 Plastic flashing and rubber.

.5 Documents to be submitted for quality assurance purposes

.1 Test reports: Submit certified test reports in accordance with Section 04 05 00 - Common work results for masonry.
.2 Certificates: submit the required certificates in accordance with section 04 05 00 - Common work results for masonry.
.3 Manufacturer's Instructions: submit manufacturer's instructions in accordance with section 04 05 00 - Common work results for masonry.

1.4 MEASUREMENT ON SITE

.1 Take the necessary measures on site to ensure an appropriate adjustment of the elements implemented.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle masonry accessories in accordance with the manufacturer's instructions.

.1 Keep seams and adhesives dry and protect them from moisture and frost.
.2 Store materials so that they do not sit directly on the floor and in accordance with the manufacturer's written instructions.

2 PRODUCTS

2.1 MATERIALS / MATERIALS

.1 Splice Joint Gasket: Special Fabrication Elastomer, Hardness 90 Durometer Measured to ASTM D 2240, of prescribed size and shape.
- .1 Low VOC products meeting the requirements of SCAQMD Regulation 1168.
- .2 Material: closed cell neoprene.

.2 Adhesive for lap joints: as recommended by the manufacturer of masonry flashings. Low VOC product, meeting SCAQMD regulation 1168.

.3 Stake vents: Leave empty vertical joints every 600mm in the brick row immediately above the flashing in the last row of brick at the top of the parapet or at steel angles (see details-type).

.4 Mechanical fasteners: recommended by the manufacturer of the flashings according to the needs of the works.

.5 N/A

2.2 CONTROL OF MOISTURE

.1 Stake vents: Leave empty vertical joints every 600mm in the brick row immediately above the flashing in the last row of brick at the top of the parapet or at steel angles (see details-type).

.2 N/A

.3 N/A

.4 Mortar Burr Deflectors: Shape and size appropriate to the wall cavity.

.5 Grout retaining mesh: monofilament mesh, 6 mm thick, made of high-strength, corrosion-resistant polypropylene, to prevent the flow of grout in designated areas of appropriate size according to use.

2.3 FLASHING

.1 Flashing waterproofing membrane type" BlueSkin Bakor AG or approved equivalent.

3 EXECUTION

3.1 APPLICATION

.1 Manufacturer's instructions: Comply with the manufacturer's written recommendations, including any available technical bulletins, instructions for handling, storage and use of products, and data sheet instructions.

3.2 INSTALLATION / APPLICATION OF MISCELLANEOUS ELEMENTS

.1 At the locations shown in the drawings, install continuous seam bottoms in the splice joints.

.2 Apply adhesive to lap flashing joints.

.3 Install mechanical fasteners where appropriate and in accordance with manufacturer's written instructions.

.4 Lay the strips as indicated on the drawings.

.5 Install the brick wall vents at the locations indicated on the drawings.

3.3 INSTALLATION OF MOISTURE CONTROL DEVICES

.1 Use weep holes in the vertical joints of the outer wall of hollow walls and masonry-clad walls, immediately above the flashings, at a maximum of 600 mm oc, in the horizontal plane.

.2 Install mortar burr deflectors, of appropriate size and shape, in wall cavities, where indicated and as directed.

.3 Install grout retainers of appropriate size and shape in the wall cavities at the locations indicated and as directed.

3.4 SOLID INSTALLATION

.1 Incorporate flashing into masonry in accordance with CAN / CSA A371.
- .1 In the case of exterior masonry, install flashings under the first foundation sitting on the foundation walls or the slab on the ground, on the support angles, on the steel angles placed above the windows, as well as at the bottom wall cavities, where supports or horizontal elements are routed there. Also install flashing under seated hearths and other specified locations.
- .2 In hollow walls and masonry-lined walls, install the flashings under the outer wall, from the outside to the inside, fold them up and up against the lining wall to a height of not more than 150 mm; also comply with the following requirements.
  - .1 In the case of a masonry wallboard, embed or flash the flashings to a depth of 25 mm in the joints.
  - .2 In the case of a concrete dubbing wall, insert or glue the flashings in grease strips.
  - .3 In the case of a wood-frame lining wall, staple the flashings to the wall, under the waterproof lining paper and make lap joints.
  - .4 In the case of plasterboard or fiberglass lining, glue the flashings to the wall using an adhesive recommended by the manufacturer.
- .3 Overlap the joints to a width of 150 mm, and seal them with an adhesive.

.2 At the lintels, sills and ends of the walls, shape the flashings (beads / beads) to prevent water from flowing horizontally beyond the ends of the walls.

.3 Install vertical flashings where siding is folded over the jambs of doors and windows, to prevent contact between the siding and the interior wall.

3.5 CLEANING

.1 Perform cleaning according to section 01 74 11 - Cleaning.
.1 Remove surplus materials / equipment, waste, tools and equipment from site.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 Common work results for masonry
.2 Section 04 05 12 Masonry mortaring and grouting.
.3 Section 04 05 19 Masonry anchorage and reinforcing
.4 Section 04 05 23 Masonry accessories.
.5 Section 04 22 00 Concrete unit masonry.

1.2 REFERENCES

.1 ASTM International Inc.
- .1 ASTM C 73-05, Standard Specification for Silicate Brick Calcium (Sand-Lime Brick).
- .2 ASTM C 216-07a, Standard Specification for Facing Brick (Solid Masonry Units Made of Clay or Shale).

.2 Brig Industry Association (BIA)
- .1 Technical Note No. 20-2006, Cleaning Brick Work.

.3 Green Building Council of Canada (CaGBC)
- . 1 LEED Canada -NC, Version 1.0-2004, Leadership in Energy and Environmental Design : Green Building Evaluation System for New Construction and Major Renovations (Reference Package) (including Addendum 2007).
- .2 LEED Canada -CI, version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Sustainable building evaluation system for the interior design of commercial spaces.

.4 Canadian Standards Association (CSA) / CSA International
- .1 CAN / CSA A82- 06, Fired Masonry Brick Made From Clay or Shale (Clay bricks (solid masonry elements in clay or shale)).
- .2 CAN / CSA-A165 F2004 Series, CSA Standards for Concrete Masonry Units.
- .3 CAN / CSA A371-04, Building Masonry

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to be submitted.

.2 Data sheets
- .1 Submit the required data sheets as well as the manufacturer's specifications and documentation for the products in accordance with section 01 33 00 - Documents and samples to submit.

.3 Manufacturer's instructions
- .1 Submit implementation instructions provided by the manufacturer, in accordance with Section 04 05 00 - Common work results for masonry.

.4 Samples
.1 Submit required samples in accordance with section 01 33 00 - Documents and samples to submit.

1.4 SUBMITTALS FOR INSURANCE PURPOSES QUALITY

.1 Submit certificated certificates in accordance with section 04 05 00 - Masonry - General requirements for the results of the work.

.2 Test reports and evaluation reports: submit certified reports of tests in accordance with section 04 05 00 - Common work results for masonry.

.3 Pre-implementation meeting: in accordance with Section 04 05 00 - Common work results for masonry, hold a meeting during which the requirements of the work, the manufacturer's instructions regarding the implementation and the terms of the guarantee offered by the manufacturer will be examined.

.4 Samples of the book
.1 Construct the samples of the required work as specified in Section 04 05 00 - Common work results for masonry as well as those set out below.
.2 Construct a 1200 mm x 1800 mm sample panel of an exterior brick structure.

.5 Transportation, storage and handling
.1 Transport, store and handle bricks according to manufacturer's instructions.

1.5 CONDITIONS OF IMPLEMENTATION

.1 Ambient conditions: Only assemble and install the elements when the temperature is above 5 degrees Celsius.

.2 The masonry must be maintained at a temperature of at least 5 degrees Celsius at the time of installation and for at least 48 hours thereafter.

2 PRODUCTS

2.1 MACHINED ELEMENTS

.1 Facing bricks
.1 Clay bricks, compliant with CAN / CSA A82.
.1 Type: **BRQ. 1**
.2 Category: EG.
.3 Dimensions: **57mm x 190 mm modul. met.**
.4 Color and texture: **Concrete brick « Marble stone face "by Shaw, Charcoal color.**
.5 Solid / hollow elements.
Or accepted equivalent

.2 Fittings
.1 Reinforcement elements according to section 04 05 19 - Reinforcement, connectors and anchors for masonry.

.3 Connectors
.1 According to section 04 05 19 - Masonry anchorage and reinforcing.

.4 Flashing
.1 According to section 04 05 23 - Masonry accessories.

.5 Mortars
.1 According to section 04 05 12 - Masonry mortaring and grouting.

.6 Grout
.1 According to section 04 05 12 - Masonry mortaring and grouting.

.7 Cleaners
.1 Products compatible with the support of the masonry structure and accepted by the manufacturer of the masonry elements

3 EXECUTION

3.1 EXAMINATION

.1 Examine existing surfaces and conditions and ensure that they permit the completion of the work under this section.

.2 The start of the works means that existing surfaces and conditions have been accepted.

3.2 PREPARATORY WORK

.1 Protect adjacent finished structures against damage that may result from masonry work.

3.3 APPLICATION

.1 Manufacturer's instructions: Comply with the manufacturer's written recommendations, including any available technical bulletins, instructions for handling, storage and use of products, and data sheet instructions.

3.4 IMPLEMENTATION

.1 Construction: according to CAN / CSA A371.

.2 Bond: stretcher bond

.3 Seat height: **200 mm for three / two rows of bricks and three / two joints.**

.4 Grouting: Make concave joints where they will be exposed, or where the application of a paint or other type of thin finish is prescribed.
- .1 Homogeneity of the works: mix the different batches of bricks as well as the bricks of the same batch in order to ensure the homogeneity of the color and the texture of the work.
- .2 Clean masonry with unglazed clay bricks as work progresses.
- .3 Sittings
  - .1 Install reinforcing elements in accordance with section 04 05 19 - Masonry anchorage and reinforcing.
- .4 Connectors
  - .1 Install the connectors according to section 04 05 19 - Masonry anchorage and reinforcing.
- .5 Flashing
  - .1 Install the poles according to section 04 05 23 - Masonry accessories.
- .6 Implementation of the mortar
  - .1 Apply mortar according to section 04 05 12 - Masonry mortaring and grouting. .
- .7 Implementation of the grout
  - .1 Apply grout according to section 04 05 12 - Masonry mortaring and grouting. .
- .8 Repair / Restoration
  - .1 Once the masonry is implemented, fill in the holes and cracks, remove the excess and the burrs mortar and repair the defective surfaces.
- .9 On-site quality control
  - .1 Field tests / Inspection: according to the requirements of section 04 05 00 - Common work results for masonry.
  - .2 On-the-spot checks by the manufacturer: according to section 04 05 00 - Common work results for masonry.
- .10 Tolerances
  - .1 According to CAN / CSA A371 unless otherwise indicated below.

3.5 CLEANING

.1 Carry out cleaning work in accordance with Section 01 74 11 - Cleaning.

.2 When the work is complete, proceed with site cleanup to remove accumulated dirt and debris from construction and the environment.

.3 Within 5 days following the installation of the masonry:
- .1 Clay brick masonry unglazed: clean a 1 m² wall surface designated by the Departmental Representative prescribed in section 04 05 00 - Masonry - General requirements concerning the results of the work, according to the requirements set out below, and leave on standby for one week. After the mortar has been set and cured, if no adverse effects have occurred and Ministerial Representative approval is received, protect windows, sills, doors, trim and other elements, and then clean the mortar. brick masonry as follows.

.1 Remove large lumps of mortar with a wooden pallet, without damaging the surface of the work. Saturate the masonry with clean water and rinse to remove dirt and loose mortar.
.2 Using a hard bristle brush, scrub the surfaces with a solution in accordance with the manufacturer's instructions for bricks, mortar and other components used in the composition. Provide the data sheets to the Departmental Representative for approval prior to cleaning.
.3 Repeat cleaning as often as necessary to remove mortar burrs and other stains.

.4 In the weeks following the installation of the masonry (not to exceed 30 days):
.1 Clay brick masonry unglazed: For hard-to-clean masonry, use an acidic solution that complies with the manufacturer's instructions for bricks, mortar and other components used in the composition. Provide the data sheets to the Departmental Representative for approval prior to cleaning.
.2 Before proceeding with the acid cleaning, test a wall surface of 1 m² designated by the Ministerial Representative and leave on hold for one week. Once Departmental Representative approval is received, protect windows, sills, doors, trim and other elements, then clean brick masonry with acid solution.

.5 Concrete brick masonry: clean concrete brick masonry as work progresses.
.1 Allow the mortar splashes to partially dry and then remove with a trowel. Finish cleaning by lightly rubbing the surface of the bricks with a small piece of concrete, then with a brush.

.6 Once the work is complete, remove surplus materials, waste materials, tools and safety barriers from the work site.

3.6 PROTECTION

.1 Counteract and protect masonry bricks in accordance with Section 04 05 00 - Masonry - General requirements for the results of the work.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 Common work results for masonry
.2 Section 04 05 12 Masonry mortaring and grouting
.3 Section 04 05 19 Masonry Anchorage and Reinforcing
.4 Section 04 05 23 Masonry Accessories.

1.2 REFERENCES

.1 ASTM International Inc.
  .1 ASTM E 336-07, Standard Test Method for Measuring Airborne Sound Attenuation Between Rooms in Buildings.

.2 N/A

.3 Canadian Standards Association (CSA) / CSA International
  .1 CAN / CSA-A165-F2004 Series, CSA Standards for Concrete Masonry Units contains: A165.1, A165.2, A165.3.
  .2 CAN / CSA A371-04, Building Masonry.
  .3 CSA S304.1-04, Calculation of Masonry for Buildings (Limit States Design).

.4 South Coast Air Quality Management District (SCAQMD), California State (SCAQMD)
  .1 SCAQ® Rule 1168-05, Adhesives and Sealants Applications.

.5 Underwriters Laboratories of Canada (ULC)
  .1 CAN / ULC-S101-07, Standard Fire Resistance Test Methods for Structures and Materials.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Specifications
  .1 Submit the required data sheets as well as the manufacturer's specifications and documentation for the products to be used in this work.

.3 Samples
  .1 Submit samples according to section 04 05 00 - Masonry - General requirements for the results of the work.

.4 Manufacturer's written instructions: submit implementation instructions provided by the manufacturer in accordance with section 04 05 00 - Masonry - General requirements for the results of the work.

1.4 SUBMITTALS FOR QUALITY ASSURANCE

.1 Submit certificated certificates in accordance with section 04 05 00 - Masonry - General requirements for the results of the work.

.2 Test Reports and Evaluation Reports: Submit Certified Test Reports in accordance with Section 04 05 00 - Masonry - General requirements for the results of the work.

.3 Meeting prior to implementation: in accordance with Section 04 05 00 - Masonry - General requirements for the results of the work, hold a meeting at which the requirements of the work, the manufacturer's instructions concerning the implementation and the terms of the guarantee offered by the latter will be examined.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle concrete masonry units in accordance with section 04 05 00 - Masonry - General requirements concerning the results of the work.

2 PRODUCTS

2.1 MATERIALS

.1 Common masonry units of the type appropriate for this work: in accordance with the CAN / CSA-A165 series standards (CAN / CSA-A165.1).
- .1 Type: H / 15 / A / M.
- .2 Nominal dimensions: 150, 200 and 300 mm wide x 200 mm high x 400 mm long and as shown in the drawings.
- .3 Special Shaped Elements: Sharp edges should be used for exposed angles, and custom-made elements should be used for lintels, beams and connecting beams; other special shaped elements must be provided as indicated.
- .4 Color:
  - .1 Prefinished architectural elements, colored in the mass, with one or more ground surfaces so as to expose the different colors of the natural aggregates, coated with an acrylic coating with a satin finish applied in the factory.
- .5 N/A

2.2 REINFORCEMENTS

.1 Reinforcement elements: in accordance with section 04 05 19 - Masonry Anchorage and Reinforcing

2.3 CONNECTORS

.1 Connectors: in accordance with section 04 05 19 - Masonry Anchorage and Reinforcing

2.4 FLASHING

.1 Flashing: in accordance with section 04 05 23 - Masonry accessories.

2.5 MORTAR

.1 Mortars: in accordance with section 04 05 12 - Masonry mortaring and grouting

2.6 GROUT

.1 Grout: in accordance with section 04 05 12 - Masonry mortaring and grouting

2.7 CLEANERS

.1 Low VOC products, meeting the requirements of SCAQMD Regulation 1168.

.2 Products compatible with the support of the masonry structure and accepted by the manufacturer of the masonry elements.

.3 Products compatible with the masonry elements used and in accordance with the recommendations and written instructions of the manufacturer.

2.8 TOLERANCE

.1 Tolerances for common concrete masonry units shall be in accordance with CAN / CSA A165.1 and the following requirements.
- .1 The maximum distance between the dimensions of the elements used on a particular surface shall not exceed 2 mm.
- .2 The distance between the length, the width or the height of the parallel edges of the different elements must not be greater than 2 mm.
- .3 The perpendicularity deviation of the faces of the elements must not be greater than 2 mm.

.2 Dimensional tolerances for architectural elements shall comply with the requirements of CAN / CSA A165.1 and the requirements listed below.
- .1 The maximum difference in length or height between the specified size elements used on a particular surface shall not exceed 2 mm.
- .2 The distance between the length, the width or the height of the parallel edges of the different elements must not be greater than 2 mm.
- .3 The perpendicularity deviation of the faces of the elements must not be greater than 2 mm.
- .4 The maximum width difference between the specified size elements used on a particular surface shall not exceed 2mm.

3 EXECUTION

3.1 EXAMINATION

.1 Examine existing surfaces and conditions and ensure that they permit the completion of the work under this section.

.2 The commencement of the works means that existing surfaces and conditions have been accepted.

3.2 PREPARATORY WORK

.1 Protect adjacent finished structures against damage that may result from masonry work.

3.3 IMPLEMENTATION

.1 Common masonry elements
- .1 Likewise: on set seats, in.
- .2 Installation height: 200 mm for one (1) row of elements and one (1) joint.
- .3 Seals: grooved where they will be apparent, or where the application of a paint or a finish is prescribed.

3.4 INSTALLATION OF FRAMES

.1 Install reinforcing elements in accordance with section 04 05 19 - Armatures, connectors and anchors for masonry.

3.5 CONNECTOR INSTALLATION

.1 Install the connectors according to section 04 05 19 - Reinforcement, connectors and anchors for masonry.

3.6 SOLID INSTALLATION

.1 Install the poles according to section 04 05 23 - Masonry accessories.

3.7 IMPLEMENTATION OF THE MORTAR

.1 Apply mortar according to section 04 05 12 - Masonry mortaring and grouting

3.8 IMPLEMENTATION OF THE COULIS

.1 Apply grout according to section 04 05 12 - Masonry mortaring and grouting .

3.9 REALIZATION OF THE WORK

.1 Sort masonry units in accordance with CAN / CSA A165 and approved color samples, removing damaged, cracked, wrinkled or excessively colored or textured material.

.2 Incorporate elements such as backing plates, steel angles, bolts, anchors, embedded parts, sleeves and ducts into the structure.

.3 Unless otherwise stated, erect masonry walls according to a regulated seating unit running bond

.4 Erect masonry around previously built and braced frames. Apply mortar or grout in the cavity of the wall behind the frames made of hollow elements and drown the anchoring devices.

.5 Install the masonry units against the outlets of the electrical and plumbing installations so that the flanges, rosettes and plates cover and conceal the joints.

.6 Make splice joints and do not fill them with mortar at the places indicated.

.7 Hollow elements: Spread the foundation mortar from the outside edge of the face walls. Apply a quantity on top and on the sides of the elements so as to make solid joints with a thickness equivalent to the wall thickness. Avoid putting too much mortar.

.8 Solid elements: apply mortar on any s vertical and horizontal surfaces. Avoid mortaring the air gap between the brick veneer and the lining wall.

.9 Make sure the head joints (vertical) are well compacted. Make face joints or solid bed joints as indicated.

.10 Pack the elements well.

.11 Do not reposition the items once the mortar is set. If you really need to reposition an element, remove it, clean it and put it back on a new layer of mortar.

.12 Give the apparent joints a concave shape and finish the concealed joints of outcrop.

.13 Shape the joints after initial mortar setting.

.14 Ensure continuous bonding of the elements above and below the bays.

3.10 REPAIR / RESTORATION

.1 Once the masonry is in place, fill in the holes and cracks, remove excess and mortar burrs and repair the defective surfaces.

3.11 QUALITY CONTROL

.1 On-Site Testing / Inspection: As per Section 04 05 00 - Common work results for masonry and those indicated below.

.1 Concrete masonry units will be sampled and tested by an independent testing agency designated and paid by the Departmental Representative in accordance with CAN / CSA S304.1.

.2 Acoustic insulation between two rooms will be measured by an independent testing agency designated and paid for by e the Departmental Representative, in accordance with ASTM E 336.
.3 Notify the appropriate agency 24 hours in advance when testing is required.

.2 On-the-spot checks by the manufacturer: according to section 04 05 00 - Masonry - General requirements for the results of the work.

3.12 CLEANING

.1 Perform cleaning according to section 01 74 11 - Cleaning and to those indicated below.
.1 Cleaning during work
.1 Common elements
.1 Allow the mortar burrs to partially dry on the masonry and then remove with a trowel. Finish by rubbing lightly with a small piece of concrete element, then wash the surface with a suitable brush or cloth.
.2 Architectural elements
.1 Allow the mortar burrs to partially dry on the masonry and then remove with a trowel. Finish by rubbing lightly with a small piece of concrete element, then wash the surface with a suitable brush or cloth.
.3 Iced elements
.1 As the work progresses, clean the masonry with a soft, clean cloth; clean within minutes of placing the elements. Once the work is complete, when the mortar has hardened enough to resist cleaning, wash the masonry with clean water, a soft sponge or a clean cloth, then polish it with a soft, clean cloth.

3.13 PROTECTION

.1 Counteract and protect masonry structures from concrete elements in accordance with Section 04 05 00 - Common work results for masonry.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 American National Standards Institute / National Particleboard Association (ANSI / NPA)
- .1 ANSI / NPA A208.1-2009, Particleboard.

.2 ASTM International
- .1 ASTM AT 123 / A 123M-09, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .2 ASTM AT 653 / A 653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloyed-Coated (Galvanealled) by the Hot-Dip Process.
- .3 ASTM C 578-11a, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- .4 ASTM C 1289-11, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
- .5 ASTM C 1396 / C 1396M-11, Standard Specification for Gypsum Board.
- .6 ASTM D 1761-06, Standard Test Methods for Mechanical Fasteners in Wood.
- .7 ASTM D 5055-11, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists.
- .8 ASTM D 5456-11, Standard Specification for Structural Composite Lumber Products.

.3 N/A

.4 Canadian General Standards Board (CGSB)
- .1 CAN / CGSB-11.3-FM87, Hardboard Fibreboard.
- .2 CAN / CGSB-51.32- FM77, Coating Membrane, Permeable to Water Vapor.
- .3 CAN / CGSB-51.34-FM86, Vapor Barrier polyethylene sheet for buildings, and its revision.
- .4 CAN / CGSB-71.26-FM88, Adhesive for bonding plywood to the construction timber frame of the floors.

.5 CSA International
- .1 CAN / CSA-A123.2-03 (C2008) Roofing Felt Coated with Bitumen.
- .2 CAN / CSA-A247-M86 (c1996) Insulating Fiberboard (insulating Fibreboard).
- .3 CSA B111-1974 (R2003), Wire Nails, Spikes and Staples (studs, plugs and steel wire jumpers).
- .4 CSA O112.9-10, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).
- .5 CSA O121-F08, Douglas Fir Plywood.
- .6 CAN / CSA O122-F06 (C2011), Structural members in glulam.

.7 THAT'S IT O141-F05 (R2009) Softwood Lumber.
.8 CSA O151-F09, Canadian Softwood Plywood.
.9 CSA O153-FM1980 (C2008), Poplar plywood.
.10 CSA O325-F07, Intermediate Construction Coatings.
.11 THAT'S IT O437 Series-F93 (C2011), Standards for Oriented Particleboard and Large Particleboard.
.12 CAN / CSA-Z809-08, Sustainable Forest Management.

.6 Forest Stewardship Council (FSC)
.1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship (principles and criteria for forest management).

.7 National Lumber Grading Commission (NLGA)
.1 Classification Rules for Canadian Lumber 2008.

.8 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
.1 SCAQ® Rule 1113-A2011, Architectural Coatings.
.2 SCAQ® Rule 1168-A2005, Adhesives and Sealants Applications.

.9 Sustainable Forestry Initiative (SFI)
.1 SFI-2010-2014 standard.

.10 The Truss Plate Institute of Canada
.1 Truss Design Procedures and Specifications for Metal Plate Light Connected Wood Trusses, 2007.

.11 Underwriters Laboratories of Canada (ULC)
.1 CAN / ULC-S706-09, Standard for Wood Fiber Insulation Boards for Buildings.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents / Samples to be submitted.

.2 Data sheets
.1 Submit the required data sheets and manufacturer's instructions and documentation for wood products and their accessories. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.3 Shop drawings
.1 Submitted shop drawings must bear the seal and signature of a qualified engineer recognized or licensed to practice in Québec.

1.4 QUALITY ASSURANCE

.1 Wood marking: classification print of an organization recognized by the Board of Accreditation of the Canadian Lumber Standards Commission.

.2 Marking plywood, particleboard and oriented large particle board (OSB) panels and wood-based composite panels: according to the relevant standards of CSA and ANSI.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

.2 Delivery and acceptance: deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Warehousing and handling
- .1 Store materials and equipment indoors and outdoors in a clean, dry, well-ventilated area as recommended by the manufacturer.
- .2 Store the wood to protect it from marks, scratches and scratches.
- .3 Replace defective or damaged materials and equipment with new materials and equipment.

2 PRODUCTS

2.1 FRAMEWORK ELEMENTS, STRUCTURAL ELEMENTS AND PANELS

.1 Lumber: softwood with S4S finish (milled out of 4 sides), with a moisture content not exceeding 19 % (R-SEC).
- .1 Complies with CSA standard O141.
- .2 Meets the NLGA Canadian Lumber Grading Rules.

.2 N/A

2.2 ACCESSORIES

.1 N/A
.2 N/A
.3 Blanket felt: in accordance with the CAN / CSA standard A123.2, type S.
.4 Airtightness product: polyurethane foam or closed cell polyethylene foam.
.5 N/A
.6 Wood treatment product:
- .1 All of the wood used in the construction of false framework of new windows and everywhere outside and the roof (parapets, eaves and foundations for equipment) must be treated under pressure and under vacuum, using a preservative based on chromated copper arsenate, in accordance with ACNOR 080. Oxide content: construction wood: 6.4 Kg / m^3. These data are those of minimal retention
- .2 Surface-applied preservative: water repellent based on copper naphthenate, or 5 % solution of pentachlorophenol.

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions Before proceeding with the installation of the products, ensure that the condition of the surfaces / supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out in accordance with the written instructions of the manufacturer.
  .1 Make a visual inspection of the surfaces / supports in the presence of the Ministerial Representative
.2 Inform the Ministerial Representative immediately of any unacceptable conditions found.
.3 Begin installation work only after correcting unacceptable conditions and receiving written approval from the Departmental Representative.

3.2 PREPARATORY WORK

.1 Apply a preservative on the wooden elements before installing them.

.2 Apply preservative by immersion or with a paintbrush. Coat surfaces to saturation and allow product to soak for at least three (3) minutes in the case of solid wood pieces and during a (1) minute in the case of plywood panels.

.3 Before installing the elements, generously brush the preservative on all surfaces exposed by cuts, dressings and holes made on site.

.4 Treat the following items.
  .1 Cleats and trimmings, nailing bases for fascia, hinges, nailing rods and joists for roof decks.
  .2 Wooden furs on exposed surface of masonry and concrete exterior walls.
  .3 Wooden battens used to support a wooden floor support installed on concrete slabs, on the ground or on backfill.

3.3 USE OF MATERIALS

.1 Wall panels for exterior walls
  .1 Douglas fir (Douglas fir) plywood, covering grade, or poplar plywood, coating grade, squared edges, of the thickness specified in the drawings.
  .2 Oriented Large Particleboard (OSB), of the thickness specified in the drawings.
  .3 N/A
  .4 N/A
  .5 N/A
  .6 N/A
  .7 N/A
  .8 Intermediate building coatings bearing the marking W24.
  .9 Structural chipboards in pressed wood particles, of dimensions as indicated in the drawings.

.2 Intermediate building coatings bearing the marking required according to the intended use.

.3 Structural oriented large particle board (OSB) panels of dimensions as indicated in the drawings.

.4 Underlayment
- .1 Douglas fir (Douglas fir) or Canadian softwood plywood, poplar plywood or veneer category, siding grade, squared edge, of dimensions as indicated on the drawings.
- .2 Oriented Large Particleboard (OSB), as shown in the drawings.
- .3 Hardboard panels, dimensions as indicated in the drawings.
- .4 Particle board, ANSI / NPA compliant 208.1, category PBU, of dimensions as indicated in the drawings.

.5 N/A

.6 Panels for mounting electrical equipment
- .1 Douglas fir (Douglas fir) plywood of dimensions as indicated in the drawings.

3.4 INSTALLATION

.1 Install the elements square and plumb, according to the height dimensions, levels and alignments prescribed.

.2 Realize the continuous elements from the longest possible pieces.

.3 N/A

.4 N/A

.5 N/A

.6 Install plywood wall panels in accordance with manufacturer's written instructions.

.7 Install plywood roof panels in accordance with NBC requirements.

.8 Install furring and wedges necessary to spread the wall and support cabinets, wall and ceiling finishes, siding, trim, soffits, siding, mounting panels for electrical equipment and other works, if needed.

.9 Install furring to support vertical siding when the framework does not have shims and the liner can not be nailed directly to the framework.
- .1 Install furring and wedges to ensure flatness and verticality of structures, the permissible deviation being 1: 600.

.10 Install around bays false frames, nailing strips and trim to support frames and other structures.

.11 Install battens and curbs, fascia nailing bases, nailing rods, members and other required wood supports, and secure them with galvanized fasteners.

.12 Install the joists as indicated.

.13 Do not work with particle board without taking the necessary precautions. Use dust collectors and wear a high quality respirator to cut or sand wood panels.

.14 Assemble, anchor, fix, fasten and counteract the elements to provide the necessary strength and rigidity.

.15 If necessary, mill the holes so that the heads of the bolts do not protrude.

.16 For soft cover materials, use nailing discs according to the material manufacturer's instructions.

3.5 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.

.1 Leave the places clean at the end of each working day.

.2 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with Section 01 from the work site 74 11 - Cleaning.

3.6 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repair damage to adjacent materials and equipment by installing carpentry elements.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 07 21 13 - Board insulation.
.2 Section 07 21 29 - Sprayed insulation - Polyurethane foam.

1.2 REFERENCES

.1 American Society for Testing and Materials International (ASTM)
  .1 ASTM C 553-02, Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications.
  .2 ASTM C 665-01e1, Specification for Mineral Fiber Blanket Thermal Insulation for Frame Construction and Manufactured Housing.
  .3 ASTM C 1320-05, Standard Practice for Installation of Mineral Fiber Batt and Thermal Insulation Blanket for Light Frame Construction.

.2 Canadian Gas Association (CGA)
  .1 CAN / CGA- B149 .1- F05, Installation Code for Natural Gas and Propane.
  .2 CAN / CGA-B149.2-F05, Propane Storage and Handling Code.

.3 Canadian Standards Association (CSA) / CSA International
  .1 CSA B111-1974 (R2003), Wire Nails, Spikes and Staples (steel wire nails, plugs and jumpers).

.4 Underwriters Laboratories of Canada (ULC)
  .1 CAN / ULC-S604- M1991, Prefabricated Type A Chimneys.
  .2 CAN / ULC-S702- 1997, Standard on thermal insulation of mineral fibers for buildings.

1.3 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Data sheets
  .1 Submit the required data sheets as well as the manufacturer's specifications and documentation for the products in accordance with section 01 33 00 - Documents and samples to submit.

.2 Manufacturer's instructions
  .1 Submit installation instructions provided by the manufacturer.

1.4 QUALITY CONTROL

.1 Test reports: submit test reports certifying that products, materials and equipment meet the requirements for physical characteristics and performance criteria.

.2 Certificates: submit documents signed by the manufacturer, certifying that the products, materials and equipment meet the requirements regarding physical characteristics and performance criteria.

.3 One (1) week before the beginning of the work covered by this section and the installation work, hold a meeting at which to examine:
.1 the requirements of the work;
.2 the installation conditions and the condition of the support;
.3 coordination of work with those performed by other trades;
.4 the manufacturer's installation instructions and the terms of the warranty offered by the manufacturer.

.4 Health and security: take the necessary health and safety measures in accordance with section 01 35 29.06 - Health and safety.

1.5 MANAGEMENT AND DISPOSAL

.1 N/A

2 PRODUCTS

ROXUL Plus MB for marquee parapets

2.1 SUSTAINABLE DEVELOPMENT

.1 N/A

2.2 INSULATION

.1 Insulators made of mineral fibers, mattresses and mats: ASTM compliant C 553, ASTM C 665 and CAN / ULC S702.
.1 Type: 1
.2 Thickness: as indicated.

2.3 ACCESSORIES

.1 Fasteners
.1 Fasteners: Through-type, 50 mm side, 0.8 mm thick cold-rolled carbon steel with adhesive-coated underside; annealed steel rod 2.5 mm in diameter, of appropriate length to the thickness of the insulation; self-locking washers 25 mm in diameter.

.2 Nails: Galvanized steel, 25 mm thicker than insulation thickness, to CSA B111.

.3 Staples: legs at least 12 mm long.

.4 Ribbon: type recommended by the manufacturer

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Conformity: Comply with the manufacturer's written requirements, recommendations and specifications, including the technical bulletins and installation instructions specified in the product catalogs and packaging cartons, as well as the specifications in the data sheets.

3.2 INSTALLATION OF THE INSULATION

.1 Install insulation to provide continuous thermal protection to building elements and voids and in accordance with ASTM C 1320.

.2 Install the insulation so that the factory-built vapor barrier is placed on the warm side of the building and the moisture-permeable membrane is placed on the cold side. Overlap the ends and lateral edges of the membrane on the structural members. Secure the insulation with insulated fasteners installed according to the manufacturer's recommendations. Seal butt joints and overlaps with adhesive tape. Do not tear or cut the vapor barrier.

.3 Carefully adjust the insulation on the items to be covered as well as around the electrical boxes, pipes, air ducts and frames that pass through it.

.4 Do not compress the insulation to fit the spaces to be insulated.

.5 Leave a clearance of at least 75 mm between the insulation and any heat-emitting element, eg flush-mounted luminaires, and at least 50 mm between insulation and Type A chimney walls. in accordance with CAN / ULC-S604, and type B or L exhaust duct conforming to CAN / CGA-B149.1 and CAN / CGA-B149.2.

.6 Do not cover the insulation until the installation work has been inspected and approved by the Departmental Representative.

3.3 CLEANING

1 Once the installation work has been completed, evacuate the materials surplus, waste materials, tools and safety barriers.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 N/A

.2 Canadian Urethane Foam Contractors Association (CUFCA) / Canadian Association of Polyurethane Foam Contractors

.3 Green Seal Environmental Standards
- .1 Standard GC-03-93, Anti-Corrosive Paints.
- .2 Standard GS-11-97, Architectural Paints.

.4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
- .1 Material Safety Data Sheets (MSDS).

.5 South Coast Air Quality Management District (SCAQMD), California State
- .1 SCAQMD Rule 1113-06, Architectural Coatings.

.6 Underwriters Laboratories of Canada (ULC)
- .1 CAN / ULC-S101-04, Methods of Test for Fire Resistance of Structures and Materials.
- .2 CAN / ULC-S102-03, Standard Test Method; surface burning characteristics of building materials and assemblies.
- .3 CAN / ULC-S705.1-01, Standard for Medium Density Spray-Rigid Polyurethane Foam Thermal Insulation - Material Specification.
- .4 CAN / ULC-S705.2-05, Standard for Rigid Polyurethane Foam Thermal Insulation, Medium Density - Application.

1.3 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Data sheets
- .1 Submit the required data sheets as well as the manufacturer's specifications and documentation. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the constraints and the finish.
- .2 N/A

.3 Quality assurance: submit the required documents and samples.
- .1 Test reports: submit test reports issued by recognized independent laboratories, certifying that the insulation meets the requirements for physical characteristics and performance criteria.

.2 Submit reports of fire resistance testing of structures and materials as well as surface burning characteristics of building materials and assemblies in accordance with CAN / ULC-S101 and CAN / ULC-S102, respectively.
.3 Manufacturer's instructions: Provide instructions provided by the manufacturer, including any indication of particular handling, application and cleaning procedures.

.4 Reports of the manufacturer's on-site checks: submit, at least three (3) days after the completion of the checks prescribed in PART 3, QUALITY CONTROL, copies of the manufacturer's written reports indicating that the work meets the specified criteria.

1.4 QUALITY CONTROL

.1 Insulating foam workers must meet the requirements of the CUFCA Quality Assurance Program.

.2 Qualification
.1 Fitter: person specialized in the implementation of projected insulation, having five (5) years of experience, references in support and approved by the manufacturer.
.2 Maker: a firm with at least five (5) years of experience in manufacturing products similar to those that will be implemented under this project, and having sufficient production capacity to deliver the required products on time.

.3 Samples of the book
.1 Make the samples of the required work.
.2 Make a sample of polyurethane foam insulation applied by projection of at least 10 m², showing an inside corner and an outside corner, as well as door and window bays.
.3 The sample can be part of the finished work.
.4 Wait 24 hours before proceeding with the implementation of the foam insulation to allow inspection of the sample by the Ministerial Representative.

.4 Health and safety: worker protection
.1 Provide worker protection as recommended by the manufacturer and CAN / ULC-S705.2.
.2 Workers should wear gloves when performing foam insulation.
.3 Workers must not eat, drink or smoke while using foam insulation.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Packaging, transport, handling and unloading.
.1 N/A
.2 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

1.6 CONDITIONS OF IMPLEMENTATION

.1 Provide ventilation of the work area in accordance with Section 01 51 00 - Temporary Utilities Services.

.2 Ensure continuous ventilation of the work area, by intake of fresh air and extraction of stale air, throughout the duration of the implementation and for the next 24 hours, in order to maintain a non-toxic environment, no polluted and safe.

.3 Install temporary enclosures to prevent ambient air outside the work area from being contaminated by sprayed insulation or harmful vapors.

.4 Protect surfaces and equipment adjacent to work against damage that may be caused by projection beyond established limits, dispersion and chalking of insulating material.

.5 Only use the insulation when the surface temperature and the ambient air temperature are within the limits prescribed by the manufacturer.

2 PRODUCTS

2.1 MATERIALS / MATERIALS

.1 Insulation: polyurethane spray foam, in accordance with CAN / ULC-S705.1.

.2 Soy products are also acceptable.

.3 Primers: in accordance with the manufacturer's recommendations, taking into account the state of the surfaces of the works to be insulated.

.4 Equipment: Spraying equipment must meet the requirements of CAN / ULC S705.2 and the manufacturer's recommendations.

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with manufacturer's written requirements, recommendations, and specifications, including any available technical bulletins, instructions for handling, storing, and implementing products, and data sheet instructions.

3.2 IMPLEMENTATION

.1 Apply insulation to clean surfaces in accordance with CAN / ULC-S705.2 and manufacturer's written instructions.

.2 Also apply a primer to areas recommended by the manufacturer.

.3 Apply the insulation thickness indicated.

3.3 OTHER QUALITY CONTROL

.1 On-site inspections by the manufacturer

.1 The manufacturer must make recommendations as to the use of the product (s), and make periodic visits to verify whether the implementation has been carried out as recommended.

3.4 CLEANING

.1 Perform cleaning according to section 01 74 11 - Cleaning.

.2 After completion of the implementation and performance monitoring, remove surplus materials and equipment, waste, tools and equipment from the work site.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 American Society for Testing and Materials International (ASTM)
- .1 ASTM B 117-03, Standard Practice for Operating Salt Spray (Fog) Apparatus.
- .2 ASTM C 67-05, Standard Test Methods for Sampling and Testing. Brick and Structural Clay Tile.
- .3 ASTM C 144-04, Standard Specification for Aggregate for Masonry Mortar.
- .4 ASTM D 968-05, Standard Test Methods for Abrasion Resistance of Organic Coatings by the Falling Abrasive.
- .5 ASTM D 2247-02, (US Federal Test 141A 6201), Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- .6 ASTM E 72-05, Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
- .7 ASTM E 96 / E 96M-05, Standard Test Methods for Water Vapor Transmission of Materials.
- .8 ASTM E 695-03, Standard Method for Measuring Relative Resistance of Walls, Floor, and Roof Construction to Impact Loading.
- .9 ASTM G 154-05, Standard Practice for Operating Fluorescent Light Exposure for UV Exposure of Nonmetallic Materials.

.2 Canadian General Standards Board (CGSB)
- .1 CAN / CGSB-1.162-2004, Emulsion type coating for stucco and masonry.
- .2 CAN / CGSB-19.24-M90, Multi-Component, Chemical Curing Sealant.

.3 Canadian Standards Association (CSA) / CSA International
- .1 CAN / CSA-A3000-F03 (R2005) Compendium of Binder Materials (Contains: A3001, A3002, A3003, A3004 and A3005).
  - .1 CSA-A3001 F03, Binders used in concrete.

.4 Health Canada (HC)
- .1 Workplace Hazardous Materials Information System (WHMIS).
- .2 Material Safety Data Sheets (MSDS).

.5 Underwriters Laboratories of Canada (ULC)
- .1 CAN-ULC-S101-F04, Standard Fire Resistance Test Methods for Structures and Materials.
- .2 CAN-ULC-S102-F03, Standard Test Method - Surface Burning Characteristics of Construction Materials and Assemblies.
- .3 CAN-ULC-S134-92, Standard Method of Fire Testing of Exterior Wall Assemblies.

1.3 DEFINITIONS

.1 Facing joint: function and aesthetic seal (ease of installation). Siding joints are grooves, decorative boards, and engravings, which also serve as a starting and stopping point for the application of finishing plaster.

.2 Adhesive plaster: Coating constituting the base coat. Polymer-modified, or hydraulically-based polymer-based polymer material, generally containing Portland cement.

.3 Base coat: a two-component coating layer consisting of an adhesive coating and a reinforcing mesh.

.4 Adherent or Direct Application Exterior Coating System: Coating system applied directly to rigid cladding boards. This type of system differs from exterior insulation and cladding systems in that it does not have insulation.

.5 Skin: facing layer consisting of the base layer, the reinforcing mesh and the topcoat.

.6 Reinforcing mesh: woven fiberglass reinforcement applied to the base coat and providing protection against impact.

1.4 DESCRIPTION OF THE SYSTEM

.1 Performance requirements : ensure that, once implemented, soft skin systems have the performance characteristics listed below.
- .1 According to CAN-ULC-S134.
- .2 Wear resistance of the topcoat: Sand test method according to ASTM D 968, without harmful effect.
- .3 Salt spray resistance of the topcoat according to ASTM B 117, no effect after 300 hours of exposure to 5% salt spray.
- .4 Moisture resistance of the topcoat: according to ASTM D 2247 (the US Federal test 141 A6201), without damaging effect after 14 days of exposure.
- .5 Resistance to accelerated weathering (accelerated aging): according to CAN / CGSB-1.162 and ASTM G 154, no effect after 2000 hours.

1.5 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Data sheets
.1 Submit the required data sheets.
.2 Submit Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS). WHMIS Material Safety Data Sheets for Facade Exterior Cladding Systems, Directly Coated on the Substrate, must meet the requirements of Health Canada and Human Resources Development Canada - Labor. They must indicate the VOC content of the products.
.3 Submit the technical sheets for the materials used for the realization of the system. The cards must indicate the characteristics of the products, the performance criteria, the constraints and the colors.

.3 Shop Drawings: Submit the required shop drawings, which must indicate the wall configuration, relevant details, connections, expansion joints, finish and sequence of implementation. They must show the interface details with the walls, windows, the airtightness system, the vapor barrier and other relevant elements.

.4 Samples
.1 Submit the required samples.
.1 Submit a 300 mm x 300 mm system sample of each proposed color, before proceeding with the construction of samples of the work.

1.6 QUALITY ASSURANCE

.1 Quality assurance
.1 Fitter: company or person specializing in exterior cladding facade systems applied directly to the substrate, having five (5) years of experience, references in support and approved by the manufacturer.
.2 The system must be implemented by workers certified by the manufacturer of the system used.
.3 In this respect, submit the necessary certificates to the Ministerial Representative before the start of the work.

.2 Samples of the book
.1 Make the samples of the book.
.2 N/A

.3 Make the sample of the work at the designated place.

.4 Allow the Departmental Representative 24 hours to inspect the sample before proceeding.

.5 Once accepted, the sample will be the minimum standard for the work. It can be integrated into the finished work.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 N/A

.2 Transport and store materials and equipment according to the manufacturer's instructions.

.3 Protect base and finish coats against freezing.

.4 Safety: Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding the use, handling, storage and disposal of insulation materials, adhesives and caulks.

1.8 CONDITIONS OF IMPLEMENTATION

.1 Temperature, relative humidity, water content
- .1 Operate the system when the temperature and relative humidity of the ambient air, and the water content and temperature of the substrate are in accordance with the manufacturer's written instructions.
- .2 Maintain the ambient temperature above four (4) degrees Celsius during the application of the base coat and until it is dry (at least 24 hours).
- .3 Maintain the ambient temperature above four (4) degrees Celsius during the application of the adhesive and until it is dry (at least 24 hours).

1.9 WARRANTY

.1 In the case of the work covered by this section, that is section 07 24 10.03 - Coated exterior cladding systems applied directly to the substrate, the specified 12-month warranty is extended to 120 months.

.2 The Contractor certifies that the system is guaranteed against leakage and delamination for a period of 120 months.

2 PRODUCTS

2.1 SURFACE PREPARATION

.1 Packaging / sealing product: based on acrylic, transparent, compatible with the products used for the realization of the coating system and recommended by the manufacturer of the latter.

.2 Smoothing compound: reinforced compound based on polymer modified hydraulic binders.

2.2 BASIC COATING

.1 Acrylic bases:
Acrylic base (for leveling between 2.4 mm and 6.4 mm (3/32 "and 1/4") thickness per layer): Must be a dough product, based on 100% acrylic fibers with and containing no asbestos, such as NIVELEX, manufactured by Adex Systems inc. or equivalent approved.

.2 Priming layer:
Will be an acrylic, silica-containing, roll-applied compound, such as PRIMEX, manufactured by Adex Systems Inc. or equivalent approved.

.3 Acrylic finish plaster on lightweight concrete panels:
.1 Will be a paste product, 100% acrylic based, factory mixed, ready to use, with integrated color and texture.
.2 **Will be texture Sanded as in the charter of ADEXinc.**
.3 **Colors: At the discretion of the Ministerial Representative in the ADEXinc charter.**

2.3 REINFORCEMENT MESH

.1 The reinforcement mesh:
.1 Fiberglass mesh, alkali-resistant to ANSI / EIMA 99-A-2001;
.2 Must be sold by ADEXinc Systems. or by its authorized distributors;
.3 Must comply with ASTM E-2098, ASTM D 5035;
.4 Install the 2 types of mesh in the acrylic base on the entire surface.
.1 Design Lattice: 150 g / m2 (4.5 oz / v2)
.2 Lattice Armor: 500 g / m2 (15 ounces / v2

2.4 FINISH COATING

.1 Modified polymer coating consisting of dispersed acrylic resins, silica, mineral pigment and adducts of the color chosen by the Departmental Representative.

.2 Modified plaster - synthetic stucco, acrylic type, consisting of cement, silica sand, mineral pigment and additives, color and textured finish selected by the Departmental Representative.

2.5 PRINTING PRODUCT

.1 N/A

2.6 ACCESSORIES

.1 Corner moldings, flush moldings, retaining moldings, starter strips and other galvanized steel accessories recommended by the manufacturer of the system and suitable for the latter.

2.7 EXPANSION JOINTS

.1 PVC expansion joints or as recommended by the manufacturer.

.2 Expansion joints should be wrapped.

.3 Sealant: non-corrosive and non-staining, compatible with seal materials and sealants, and recommended by the manufacturer of these.

.4 Primary: according to the manufacturer's instructions.

.5 Bottom of joints: extruded polyethylene, cellular, hardness 20 durometer Shore A, having a tensile strength of 140 to 200 kPa, oversized from 30 to 50 %.

2.8 MIXING PRODUCTS ON SITE

.1 Cement: conforms to CSA-A3001type GU, fresh and free of agglomerates.

.2 Sand: in waterproof bags.
.1 For white cement: silica sand, 30-50 mesh.
.2 For gray cement, sand for making mortar, according to ASTM C 144.

.3 Water: clean, limpid and free of debris

2.9 MIX

.1 Overview
.1 Mixer: high speed, clean and free of rust.
.2 Mixing buckets: clean and free of rust.
.3 Mixtures: without additives.

.2 Packaging product: mixed according to the manufacturer's written instructions.

.3 Smoothing compound: Mixed to uniform consistency according to the manufacturer's written instructions.

.4 Base Coat: Mixed to uniform consistency, according to the manufacturer's written instructions.

.5 Finishing Coat: Mix until uniform, according to the manufacturer's written instructions.

3 EXECUTION

3.1 RECOGNIZED INSTALLATION COMPANIES

.1 Adex System Inc.

3.2 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with the manufacturer's written requirements, recommendations, and specifications, including any available technical bulletins, instructions for handling, storing, and implementing products, and the information in the data sheets.

3.3 EXAMINATION OF SURFACES

.1 Examine existing media and verify surfaces are contaminated, cracked, damaged by moisture or otherwise deteriorated; check their degree of absorption, moisture content and flatness.
  .1 The flatness gap must not be greater than 6 mm by 2500 mm in length, in accordance with the written instructions of the manufacturer.

.2 Notify the Departmental Representative, in writing, of any deviation from the specified requirements or any other condition that may affect the implementation of the coating system.

.3 Start work only after receiving written approval from the Ministerial Representative.

3.4 PREPARATORY WORK

.1 Protection of works
  .1 Protect adjacent surfaces from damage that may result from work performed under this section.
  .2 Protect the liner against water ingress, at the end of each work day or at the completion of each portion of the work.
  .3 After completion of each portion of the work, protect the coating against moisture for at least 48 hours.

.2 Surface preparation
  .1 Ensure that environmental and site conditions are appropriate for the implementation of the system.
  .2 Prepare new surfaces according to the manufacturer's written instructions.
  .3 Conditioning / sealing product: Acrylic-based, transparent, compatible with the products used for the realization of the coating system and recommended by the manufacturer of the latter.
    .1 Add water and mix.
    .2 Apply the product on a clean, dry surface ensuring even coverage according to the manufacturer's written instructions.
  .4 Smoothing compound: reinforced compound based on polymer modified hydraulic binders.
    .1 Add water and mix.
    .2 Let stand for the appropriate period.
    .3 Apply the smoothing compound to the existing substrate, with a thickness of no more than six (6) mm.
    .4 Leave to dry perfectly.

3.5 IMPLEMENTATION

.1 Implement the coating system in accordance with CAN- ULC-S134.

.2 Accessories

.1 Install the required accessories according to the indicated details, according to the requirements of the system manufacturer and in accordance with CAN- ULC-S134.

.3 Seals
- .1 Bay tables and decorative grooves
  - .1 Make bay tables and cut decorative grooves using the appropriate tools at the locations shown on the detail drawings.
- .2 Expansion joints
  - .1 Make expansion joints where indicated, according to the manufacturer's written instructions.
  - .2 Make expansion joints at the joints of rupture in the support, at the junction with a new construction, where the movements are expected to be greater than six (6) mm.

.4 Laying the mesh and applying the base plaster
- .1 Lay 225mm x 300mm thin mesh strips diagonally across corners, fixtures, grilles and system penetrations.
  - T.1 Drown them in a base coat by troweling them from the center to the ends to remove any wrinkles.
- .2 Lay fine lattice on the boards.
  - .1 Drown in a base coat by troweling it from the center to the ends to remove any wrinkles.
- .3 Lay corner trellis with ridges and pickings.
  - .1 Dredge the trellis in a base coat by troweling it from the center to the ends.
- .4 Laying the trellis of great resistance: apply a base coat layer of uniform thickness of approximately three (3) mm to the substrate.
  - .1 Spread the plaster horizontally or vertically, in strips of 1000 mm, then drown the trellis by smoothing it from the center to the ends.
  - .2 Abutt the joints between the trellis strips.
  - .3 Secure the trellis with mechanical fasteners.
  - .4 Allow the coating to dry.

.5 Laying standard trellis
- .1 Apply a base coat of uniform thickness of three (3) mm to the substrate, including surfaces already covered with a high strength mesh.
- .2 Spread the plaster vertically or horizontally, in strips of 1000 mm, then drown the trellis by trowelling from the center to the ends.
  - .1 Secure the trellis with mechanical fasteners.
- .3 Overlap the truss strips by at least 64 mm. The overlap must also be 64 mm at the junction with fine mesh strips.
- .4 Thin joints and edges.
- .5 Application of the topcoat
  - .1 Apply the finish coat according to the manufacturer's written instructions.
  - .2 Apply a print coat to the dried basecoat and let it dry before applying the topcoat.

.3 Apply the topcoat directly to the base coat or print coat only when the coat is dry.
.4 Apply topcoat either by spraying or troweling as recommended by the manufacturer.
.5 Apply the topcoat continuously, performing the covers on a still wet edge.
.6 Do not apply side-by-side finish coat from two different mixes.
.7 Do not apply a finish coat in or on the seals.
.1 Apply only on the outer wall of walls.
.8 Do not apply topcoat to unprepared or uneven surfaces.
.9 Apply textured or granular finishes to wall surfaces as indicated and in accordance with manufacturer's written instructions.

3.6 CLEANING

.1 Upon completion of work, remove surplus materials, waste materials, burrs and debris, tools and safety barriers.

.2 Clear the surface and adjacent structures of foreign material resulting from the implementation work.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 07 92 00 Joint Sealants

1.2 REFERENCES

.1 STM International Inc.

.1 STM C 726-05, Standard Specification for Mineral Fiber Roof Insulation Board.

.2 ASTM C 728-05, Standard Specification for Perlite Thermal Insulation Board.

.3 ASTM C 1177 / C 1177M-06, Standard Specification for Glass Matte Gypsum Substrate for Use as Sheathing.

.4 ASTM C 1396 / C 1396M-06a, Standard Specification for Gypsum Board.

.5 ASTM D 41-05, Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.

.6 ASTM D 312-00 (2006), Standard Specification for Asphalt Used in Roofing.

.7 ASTM D 448-03a, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.

.8 ASTM D 2178-04, Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.

.9 ASTM D 6162-00a, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.

.10 ASTM D 6163-00e1, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.

.11 ASTM D 6164-05, Standard Specification for Styrene Butadiene Styrene (SBS). Modified Bituminous Sheet Materials Using Polyester Reinforcements.

.12 ASTM D 6222-02e1, Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcement.

.13 ASTM D 6223-02e1, Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcement.

.14 ASTM D 6509-00, Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcement.

.2 Canadian General Standards Board (CGSB)

.1 CGSB 37-GP-9MA-83 Primer, Asphalt, Unfilled for asphalt roofing dampproofing and waterproofing.

.2 CGSB 37-GP-56M-80b (A1985), Modified, prefabricated and reinforced bituminous membrane for roofing.

.3 CAN / CGSB-51.33-M89, Sheet vapor barrier, except polyethylene, for buildings.

.3 N/A

.4 Canadian Roofing Contractors Association (CCAA)
.1 Quote, Covers, 1997, ACEC.

.5 Canadian Standards Association (CSA) / CSA International
.1 CSA A123.21-F04, Standard Test Method for Wind-Resistant Dynamic Wind Resistance of Mechanically Attached Membrane Roofing Systems.
.2 CSA-A123.3-F05, Organic roofing felt impregnated with bitumen core.
.3 CSA-A123.4- F04, Bitumen used for the waterproofing and the realization of multilayer coatings for roofs.
.4 CSA A231.1-06, Precast Concrete Paving Slabs.
.5 CSA O121-F08, Douglas Fir plywood.
.6 CSA O151- F04, Canadian Softwood Plywood.

.6 Factory Mutual (FM Global)
.1 FM Approvals - Roofing Products.

.7 Health Canada - Workplace Hazardous Materials Information System (WHMIS)
.1 Material Safety Data Sheets (MSDS).

.8 Underwriters Laboratories of Canada (ULC)
.1 CAN / ULC-S701-05 Standard for Polystyrene Thermal Insulation, Panels and Pipe Coatings.
.2 CAN / ULC-S702.2-03, Standard for Mineral Fiber Thermal Insulation for Buildings.
.3 CAN / ULC-S704-03, Standard for Polyurethane and Polyisocyanate Thermal Insulation: Coated Panels.
.4 CAN / ULC-S706-02, Standard for Wood Fiber Thermal Insulation for Buildings.

1.3 ADMINISTRATIVE TERMS

.1 One (1) week before the start of the work, hold a meeting with the Ministerial Representative, during which will be discussed:
.1 the requirements of the work;
.2 the condition of the structure and the roof support;
.3 coordinating the work of this section with those carried out by other trades;
.4 installation instructions provided by the manufacturer and the terms of the warranty offered by the manufacturer.

1.4 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to be submitted.

.2 Data sheets
- .1 Submit two (2) copies of the most recent product data sheets covering the materials of the cover and specifying product characteristics, performance criteria, dimensions, limitations and finish.
- .2 Not applicable

.3 Submit shop drawings required.
- .1 Shop drawings shall indicate or show details of flashings, shrinkage joints and tapered block insulation.
- .2 The drawings must indicate the arrangement of the insulation in tapered blocks.

.4 N/A

.5 Manufacturer's Certificate: Submit a certificate stating that the products meet or exceed the prescribed requirements.

.6 Test reports and evaluation reports: submit reports of tests that have been performed in the laboratory, certifying that bitumen and roofing felts and the membrane comply with the requirements of this section.

.7 Manufacturer's instructions for use: Indicate, if necessary, any special precautions relating to the bonding of membrane sheets.

.8 N/A

.9 N/A

1.5 QUALITY ASSURANCE

.1 Installer Qualification: A company or person who specializes in the production of modified bitumen membrane covers, with five (5) years of experience.

.2 N/A

1.6 FIRE PROTECTION

.1 Portable fire extinguishers
- .1 Portable permanent pressure fire extinguishers, refillable, equipped with a flexible hose and a nozzle with shut-off valve.
- .2 ULC approved fire extinguishers for Class A, B and C fire.
- .3 One (1) 14 kg fire extinguisher per torch user, on the roof, located within 6 m of the roof.

.2 Ensure the presence of a fire safety officer for a period of one (1) hour after the end of the work day.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

.2 Warehousing and handling
- .1 Safety: Comply with the safety requirements of the Workplace Hazardous Materials Information System (WHMIS) with respect to the use, handling, storage and disposal of bitumen as well as primers and sealants and caulking.
- .2 Store materials in a dry, weather-proof area so that they are not in contact with the ground.
- .3 Felt and membrane rolls should be stored upright; in the case of membranes, the overlapping edge must be at the top.
- .4 Only remove from the room or storage area the quantity of materials that will be implemented the same day.
- .5 Make plywood traffic paths over the finished work to allow for the passage of people and materials.
- .6 Store sealants at a temperature equal to or greater than 5 degrees Celsius.
- .7 Protect insulating materials against daylight, inclement weather and any harmful substances.

.3 Packaging Waste Management: recover packaging waste for reuse in accordance with Section 01 74 21 - Management and disposal of construction / demolition waste.
- .1 Collect and sort plastic waste, paper packaging and corrugated cardboard in accordance with the Waste Management Plan.
- .2 Fold metal strips, flatten them and place them in a designated area for recycling.

1.8 CONDITIONS OF IMPLEMENTATION

.1 Ambient conditions
- .1 Do not proceed with the application of roofing materials when the temperature is below -18 degrees Celsius in the case of a membrane glued by torch welding, or when the temperature is below that recommended by the manufacturer. case of a membrane adhered to the bitumen applied with a mop.
- .2 The solvent-based adhesive must be applied at a temperature equal to or greater than -5 degrees Celsius.

.2 The roof rack must be dry, free of snow and ice. Use only dry materials, and apply them only when weather conditions will not promote moisture penetration into the roofing system.

1.9 GUARANTEE

.1 For the work covered by this section, that is section 07 52 00 - Modified Bitumen Membrane Covers, the Warranty Period of 12 month is increased to 60 months.

2 PRODUCTS

2.1 PERFORMANCE CRITERIA

.1 It is essential that the different materials forming part of the roofing system are compatible with each other. Provide the Departmental Representative with a written statement certifying that the materials and components of the roofing system, as implemented, are compatible.

.2 Cover System: Complies with CSA A123.21 for dynamic resistance to pulling under wind.

2.2 SUPPORT PANEL

.1 Support panel asphaltic with vapor barrier membrane.
- .1 Description: Panel made of an SBS modified bitumen membrane with a polyester reinforcement, laminated at the factory on a semi-rigid asphaltic board. The panel measures 0.91 m x 2.44 m (3 ft x 8 ft). The surface has a sanded finish. The membrane has self-adhesive, heat-sealable longitudinal joints.
- .2 Thickness: 4,8 mm (3/16 in)
- .3 To comply with the standard: CGSB 37.56-M (9th draft).

Reference product: Soprasmart Board 180 Soprema sandblasted or approved equivalent.

.2 Strip of continuity of the vapor barrier
- .1 Description: Membrane composed of SBS modified bitumen and a composite reinforcement. The upper side is sanded, the underside is self-adhesive and covered with a detachable silicone cover.

Reference product: SOPRALENE STICK HR40 from SOPREMA or approved equivalent.

2.3 MEMBRANE

.1 Base layer for common parts: membrane compliant with CGSB 37-GP-56M.
- .1 Prefabricated membrane: made of styrene-butadiene-styrene (SBS) polymer-elastomer, reinforced with non-woven polyester fibers according to ASTM standard D 6164.
- .2 Type 1
- .3 Class A - surface covered with granules
- .4 Category 1 - normal service

Reference product: COLVENT BASE 830 from SOPREMA or approved equivalent.

.2 Base layer for surveys and parapets.
- .1 Membrane made of SBS modified bitumen and composite reinforcement. The surface is covered by a heat-sealable plastic film, the underside is covered with a detachable protective sheet.

The surface should be marked with three (3) lines to facilitate alignment of the rollers.

.2 To comply with the standard: CGSB 37.56-M (9th draft).

Reference product: SOPRALENE FLAM STICK from SOPREMA or approved equivalent.

.3 Finishing coat for common parts: membrane to CGSB 37-GP-56M, reinforced with polyester fiber and fiberglass according to ASTM D 6162.

.1 Prefabricated membrane: styrene-butadiene-styrene (SBS) elastomeric polymer membrane, reinforced with glass and polyester.

.2 Type: 1

.3 Class: A - surface covered with granules

.4 Category: 1

.5 Self-adhesive polyethylene soffit, covered by a detachable protective sheet.

Reference product: SOPRASTAR FLAM HDGR from SOPREMA or approved equivalent.

.4 Finishing coat for surveys and parapets:

.1 Membrane made of SBS modified bitumen and composite reinforcement. The surface is protected by white solar reflectance (SRI) granules 82, the underside is covered by a heat-sealable plastic film.

.2 To comply with the standard: CGSB 37.56-M (9th draft).

Reference product: SOPRASTAR FLAM HDGR from SOPREMA or approved equivalent.

.5 Starting rolls: SBS-modified bitumen-based waterproofing membranes with a granular coated surface of 100 mm (4 po) on each side. The underside is covered by a heat-sealable plastic film.

To comply with the standard: CGSB 37.56-M (9th draft).

Reference product: SOPRASTAR STARTER FLAM GR from SOPREMA or approved equivalent.

.6 Lap strip: 240 membrane strip mm (9.45 po) composed of SBS modified bitumen and a composite reinforcement. Both sides are covered with a heat-sealable plastic film. The tape is used to seal transverse overlaps.

To comply with the standard: ASTM D6162.

Reference product: SOPRALAP and / or SOPRALAP STICK for sanded surfaces of SOPREMA or approved equivalent.

2.4 ADHESIVE

.1 Adhesive for bonding of lining or overlap panels and insulation: Bi-component urethane adhesive with low expansion, fast curing and no temperature limit.

Reference product: SOPREMA DUOTACK or approved equivalent.

2.5 DOUBLING PANELS

N/A

2.6 BITUMEN

N/A

2.7 POLYSTYRENE INSULATION

N/A

2.8 EXPANDED POLYSTYRENE INSULATION WITH FIBER PANEL COATING

N/A

2.9 EXTRUDED POLYSTYRENE INSULATION, WITH CONCRETE CAP

N/A

2.10 FIBER INSULATION [GLASS] [MINERALS]

N/A

2.11 POLYISOCYANURATE INSULATION

. 1 Insulation in accordance with CAN / ULC-S704 -11, Type 2; with closed cellular structure core, glass fiber coating coated with polymers; flame spread index 40-60; the indicated thickness.

Reference product: SOPRA-ISO from SOPREMA or approved equivalent.

2.12 CELLULAR GLASS INSULATION

N/A

2.13 EXPANDED PERLITE INSULATION

N/A

2.14 INSULATION IN PANELS OF FIBERS

N/A

2.15 SEALING PRODUCTS

.1 Self-adhesive membrane primer: Primer composed of SBS synthetic rubbers, resins known for their adhesion and volatile solvents. Used as a primer to improve the adhesion of self-adhesive waterproofing membranes.

Reference Product: SOPREMA ELASTOCOL STICK or approved equivalent.

.2 Sealants: Multipurpose putty based on SBS modified bitumen, fiber, mineral materials and solvents.

Reference product: SOPRAMASTIC from SOPREMA or approved equivalent.

.3 Sealant: One-component bitumen / polyurethane waterproofing resin and polyester reinforcement.

Reference product: ALSAN FLASHING and ALSAN FRAME from SOPREMA or approved equivalent.

2.16 TRAFFIC PATHS

N/A

2.17 CARPENTRY

.1 Refer to section 06 10 00 - Carpentry.

2.18 CANT STRIPS

.1 Refer to section 06 10 00 - Carpentry

2.19 ATTACHMENTS

N/A

2.20 BANDS

3 EXECUTION

3.1 QUALITY OF WORK EXECUTION

.1 Carry out the support exam, perform the preparatory work and apply the roofing in accordance with the roofing contractors / roofing contractor’s association manual, especially with respect to fire safety.

.2 Apply the primer according to the manufacturer's written recommendations.

.3 Between the walls and the roof, interpose an interface of durable rigid material, or sheet steel, intended to ensure the continuity of the airtightness system.

.4 Make the connection of the assembly, components and materials considering the design loads of the considered elements.

3.2 EXAMINATION OF COVER SUPPORT

.1 Verification of existing conditions

.1 In conjunction with the Departmental Representative, check the condition of the support, parapets, burst joints, roof drains, plumbing vents and vent outlets to determine if work can begin.

.2 Evaluation

.1 Before starting work, make sure:

.1 the roof deck is solid, level, smooth, dry and free of snow, ice and frost, and has been cleaned of dust and debris with a broom. It is forbidden to use calcium or de-icing salt to remove ice and snow;

.2 the low walls and mounting frames of the fixtures are in place;

.3 N/A

.4 the plywood or timber nailing plates were installed on the walls and parapets as indicated.

.3 Do not install roofing materials when it is raining or snowing.

3.3 PROTECTION OF WORKS IN PLACE

.1 Protect walls, traffic lanes, sloped roofs and nearby structures from areas where materials or equipment must be hoisted or used.

.2 Provide and set up signs and safety barriers, and keep them in good condition until the end of the work.

.3 Remove drops and dirt from bitumen without delay.

.4 Ensure that rainwater is removed to the edge of the roof, as far as possible from the facade of the building, until the drains or funnels have been installed and connected.

.5 Protect the cover against damage that could be caused by traffic, among other things. Take the precautions deemed necessary by the Ministerial Representative.

.6 At the end of each work day or when work is interrupted due to bad weather, protect finished surfaces as well as materials that have been removed from the room or storage area.

.7 When metal connectors are used, these and the metallic elements of the support must be galvanized or treated against rust.

3.4 PREPARATION - METALLIC SUPPORT (A RIBBING)

N/A

3.5 N/A

N/A

3.6 PRIMARY APPLICATION

N/A

3.7 INSTALLATION OF THE VAPOR SHIELD (ON STEEL SUPPORT)

N/A

3.8 INSTALLATION OF THE VAPOR SHIELD (ON CONCRETE SUPPORT / PLYWOOD / PLASTER PLATES)

N/A

3.9 INSTALLATION OF THE VAPOR BARRIER (ON WOODEN SUPPORT)

.1 Securely attach one (1) layer of underlayment sheets using cover nails placed 150 mm oc along the seams and 300 mm oc across the sheets.

.2 Walnut two (2) layers of fiberglass felts in bitumen applied at a rate of 1.2 kg / m².

.3 Before installing the modified bitumen vapor barrier sheets, unroll them and let them rest.

3.10 MAKING AN APPARENT ORDINARY MEMBRANE COVER (UNPROTECTED)

.1 Laying of insulation in total adhesion, by adhesive bonding
- .1 Bond the insulation to the steel backing with a solvent-based adhesive.
- .2 Place the panels in parallel rows staggered; the panels must be joined, in close contact.
- .3 At the end of the row, cut the panels to the required length.
- .4 Apply the adhesive in continuous strips at 300 mm oc.
- .5 Apply one (1) layer of draining leaves or release leaves to separate the membrane and insulation.

.2 N/A

.3 N/A

.4 N/A

.5 Laying of the doubling panels, in adhesion
- .1 Glue the lining or overlap panels over the insulation with a vulcanizing adhesive applied at the rate of 1 L / m².
- .2 Place the panels in parallel rows with an overlap of about 25 mm.
- .3 Cut the ends as needed then apply the adhesive in continuous strips at 300 mm oc.

.6 Laying of the base layer
- .1 Start at the low point, moving perpendicular to the axis of the slope. Unroll the base layer membrane, align it, and wrap it from both ends.
- .2 N/A
- .3 Unwrap the base coat membrane and torch it onto the cover support, avoiding burning the membrane, its frame or the support.
- .4 Overlap the membrane sheets at least 75 mm and 150 mm, on the sides and ends respectively.
- .5 The base coat must not show any swelling, creasing or yawning.

.7 Laying the finishing layer
- .1 Start at the low point, moving perpendicular to the axis of the slope; Unroll the topcoat membrane, align it, and wrap it from both ends.
- .2 N/A
- .3 Unroll the topcoat membrane and torch it onto the base coat; avoid burning the membrane or its armature.
- .4 Overlap the membrane sheets at least 75 mm and 150 mm, on the sides and ends respectively. The joints in the topcoat should be at least 300 mm away from those in the base coat.
- .5 The finishing coat must not show any swelling, creasing or yawning.
- .6 Make the membrane according to the manufacturer's recommendations.

.8 Flashing
- .1 Complete the installation of base coat membrane flashing strips prior to applying the top coat.
- .2 Install on the substrate, membrane strips for base coat and top coat 1 m wide.
- .3 Overlap the base layer membrane flashing over the base layer to a width of at least 150 mm, then torch it or glue it with mop applied bitumen.
- .4 Overlap the top coat membrane flashing over the finishing layer to a width of at least 250 mm, then torch it.
- .5 Allow an overlap of at least 75 mm on the sides and seal.
- .6 Fix correctly to their support the flashings thus made; the work must not show any sagging, swelling, yawning or wrinkling.
- .7 Ask the flashings in accordance with section 07 62 00 - Flashing and sheet metal accessories.

.9 Roof crossings

.1 Install flashings around drains, vents, and other roof penetrations, then seal them to the membrane according to the manufacturer's details and recommendations and in accordance with section.

3.11 REALIZING A PROTECTED MEMBRANE COVER

N/A

3.12 PLACEMENT OF LEST AND PROTECTION SLABS

N/A

3.13 INSTALLING BEVELY CAPS

N/A

3.14 SETTING UP TRAFFIC PATHS

N/A

3.15 QUALITY CONTROL

.1 Inspection

.1 The inspection and testing of the coverage will be done by the test laboratory signed by the Ministerial Representative.
.2 The Departmental Representative will bear the cost of testing performed in accordance with Section 01 45 00 - Quality Control.
.3 The Contractor must notify the Departmental Representative at least 7 days prior to the date of the installation of the membrane system.

3.16 CLEANING

.1 Remove bitumen marks from finished surfaces.

.2 When finished surfaces are soiled as a result of the work in this section, contact the manufacturer of the affected area for cleaning advice and instructions.

.3 Repair or replace finished surfaces that have been altered or otherwise damaged as a result of the work covered by this section.

.4 Waste management: sort waste for reuse and recycling in accordance with Section 01 74 21 - Management and disposal of construction / demolition waste.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 07 52 00 Modified Bituminous Membrane Roofing

.2 Section 08 44 13 Glazed aluminum curtain wall systems

1.2 REFERENCES

.1 The Aluminum Association Inc. (AAI)
- .1 AAI-Aluminum Sheet Metal Work in Building Construction-2002.
- .2 AAI DAF45-03, Designation System for Aluminum Finishes.

.2 American Society for Testing and Materials International (ASTM)
- .1 ASTM AT 167-99 (2004), Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .2 ASTM AT 240 / A 240M-07e1, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- .3 ASTM AT 606-04, Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.
- .4 ASTM AT 653 / A 653M-07, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process.
- .5 ASTM AT 792 / A 792M-06a, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- .6 ASTM B 32-04, Standard Specification for Solder Metal.
- .7 ASTM B 370-03, Standard Specification for Copper Sheet and Strip for Building Construction.
- .8 ASTM D 523-89 (1999), Standard Test Method for Specular Gloss.
- .9 ASTM D 822-01 (2006), Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.

.3 Canadian Roofing Contractors Association (CCAA)
- .1 Quote, covers 1997.

.4 Canadian General Standards Board (CGSB)
- .1 CAN / CGSB-51.32-M77, Coating Membrane, Permeable to Water Vapor.
- .2 CAN / CGSB-93.1-M85, Prefinished Aluminum Alloy Sheet, for Residential Buildings.

.5 Canadian Standards Association (CSA) / CSA International
- .1 CSA A123.3-F05, Organic roofing felt impregnated with bitumen core.
- .2 AAMA / WDMA / CSA 101 / IS2 / A440-2008, Standard / Specification for Windows, Doors, and Unit Skylights.
- .3 CSA B111-1974 (R2003), Wire Nails, Spikes and Staples.

.6 Green Seal Environmental Standards
.1 Standard GS-03-93, Anti-Corrosive Paints.
.2 Standard GS-11-97, Architectural Paints.
.3 Standard GS-36-00, Commercial Adhesives.

.7 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
.1 Material Safety Data Sheets (MSDS).

.8 South Coast Air Quality Management District (SCAQMD), California State
.1 SCAQMD Rule # 1113-04, Architectural Coatings.
.2 SCAQMD Rule # 1168-05, Adhesives and Sealants.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Specifications
.1 Submit the required data sheets for the flashing materials, as well as the manufacturer's specifications and documentation. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.
.2 Submit two (2) copies of Material Safety Data Sheets required under WHMIS (Workplace Hazardous Materials Information System) in accordance with Section 01 35 29.06 - Health and safety.

.3 Shop drawings
.1 Submit the required shop drawings, which must bear the seal and signature of a qualified engineer recognized or licensed to practice in Québec.

.4 Samples
.1 Submit two (2) 50mm x 50mm samples of each color, finish and type of sheet available.

1.4 QUALITY ASSURANCE

.1 Pre-Implementation Meeting: One (1) week prior to the commencement of work under this section and onsite installation, hold a meeting at which:
.1 the needs of the works;
.2 the conditions of execution and the condition of the support;
.3 coordination of work with those carried out with other trades;
.4 the manufacturer's installation instructions and the terms of the warranty offered by the manufacturer.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's instructions

2 PRODUCTS

2.1 STEEL SHEET

.1 N/A

.2 N/A

.3 Commercial Grade Factory Prepainted Steel Sheet to ASTM A 526M. There is no visible galvanized steel in this project. Factory applied paint in accordance with CGSB 93-GP-3M standard F1S.

The color of all curing will be at the discretion of the Ministerial Representative in the SICO Color Chart or Benjamin Moore.
Thickness: Sizes 22, 24 and 26 - Unless otherwise indicated on the drawings, see drawings. If there is no indication in the drawing: 24 gauge.

.4 N/A

.5 N/A

.6 N/A

.7 N/A

.8 N/A

2.2 PRE-PAINTED STEEL SHEETS

.1 Commercial Grade Factory Prepainted Steel Sheet to ASTM A 526M. There is no visible galvanized steel in this project. Factory applied paint in accordance with CGSB 93-GP-3M standard F1S.

The color of all curing will be at the discretion of the Departmental Representative in the SICO Color Chart or Benjamin Moore.
Thickness: Sizes 22, 24 and 26 - Unless otherwise indicated on the drawings, see drawings. If there is no indication in the drawing : 24 gauge.

2.3 PREFINED ALUMINUM SHEETS

.1 N/A

2.4 ACCESSORIES

.1 Protective coating: Alkali resistant.

.2 Plastic Cement: Conforms to CGSB 37-GP-5Ma.

.3 Metal flashing underlayment: Perforated bitumen felt number 15, complies with CSA A123.3.

.4 Sealants: color chosen by the Departmental Representative. Only sealants listed by the CGSB as approved products may be used for the performance of this work.

.5 N/A

.6 Fasteners: Of the same material as the sheet metal used, to CSA B111, flat head and corrugated shank nails, length and thickness appropriate to metal flashings.

.7 Washers: same material as the sheet used, 1 mm thick, with rubber gaskets.

.8 Soft solder: according to ASTM standard B 32; tin alloy.

.9 Pickling flux: rosin, dilute hydrochloric acid or other commercial preparation compatible with the materials to be welded.

.10 Touch-up paint: according to the recommendations of the manufacturer of the pre-finished sheet metal.

2.5 SHAPING

.1 Metal flashings and other sheet metal members shall be shaped in accordance with the details of the Canadian Roofing Contractors Association (ACEC) FL series drawings.

.2 Aluminum flashings and other aluminum sheet elements shall be shaped in accordance with the requirements of the Aluminum Association, formulated in AAI - Aluminum Sheet Metal Work in Building Construction.

.3 Parts must be formed into lengths of no more than 2400 mm.
.1 It is important to provide, at the joints, the clearance necessary for the expansion of the elements.

.4 The exposed edges must be folded down by 12 mm on their underside.
.1 Angles must be mitered and sealed with sealant.

.5 The elements shall be square, level and precisely shaped to the required dimensions so that they are free from deformation or other defects that may affect their appearance or effectiveness.

.6 Metal surfaces to be embedded in concrete or mortar must be coated with a protective coating.

2.6 METAL FLASHING

.1 Flashings, copings and fascia must be shaped in accordance with prescribed profiles, with the sheet prefinished of 24 gauge thickness.

2.7 SLEEVES

.1 N/A

2.8 FLASHING BANDS AND COUNTERFLASHING

.1 Metal counterflashing must be made from 26 gauge sheet metal and incorporated into the masonry structures as detailed in the drawings.
.1 The elements must have oval fixing holes and be secured by means of steel / plastic washer fasteners.
.2 N/A

2.9 GUTTERS AND DOWNSPOUTS

.1 N/A

2.10 ANGLE SWIMMING

.1 N/A

2.11 FINISHES OF ALUMINUM ELEMENTS

.1 N/A

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with the manufacturer's written recommendations, including any available technical bulletins, instructions for handling, storage, and product implementation, and data sheet instructions.

3.2 INSTALLATION

.1 Set up the sheet metal works according to the instructions of the AERMQ and the indications.

.2 Conceal fixations, except where the Ministerial Representative has agreed that they are left visible.

.3 Lay an underlayment before installing the sheet metal elements.
.1 Secure it and execute 100 mm lap joints.

.4 Counter-flashing of asphalt flashings made at the meeting points of the roof and walls, mounting frames or other vertical surfaces.
.1 Make joints with simple stapling and secure them to the fastening strips, as indicated.

.5 Close the end seals and seal them with a sealant.

.6 Install plumbers and leveling strips flush with level. Caulk the top of the belts with a sealant.

.7 Insert the metal flashings under the counter flashing to form a tight seal.

.8 Fold the top end of the flashings at least 25 mm into the recessed belts or mortar joints. Secure flashings in joints with lead.

.9 With sealant caulk flashings in counter flashing.

.10 Install sealing sleeves at the prescribed locations around the elements passing through the roofing membrane.

3.3 GUTTERS AND DOWNHOLE PIPES

.1 N/A

3.4 ANGLE SWIMMING

.1 N/A

3.5 QUALITY CONTROL ON SITE

.1 On-site inspections by the manufacturer
.1 The manufacturer must make recommendations as to the use of the product (s), and make periodic visits to verify whether the implementation has been carried out as recommended.

3.6 CLEANING

.1 Perform cleaning according to section 01 74 11 - Cleaning.

.2 After completion of the implementation and performance monitoring, remove surplus materials and equipment, waste, tools and equipment from the work site.

.3 Leave the work area clean and free of grease, stains and finger marks.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 07 62 00 Sheet Metal Flashings and Accessories
.2 Section 08 44 13 Glazed aluminum curtain wall systems
.3 Section 08 80 50 Glazing

1.2 REFERENCES

.1 ASTM International
  .1 ASTM C 919- [08], Standard Practice for Use of Sealants in Acoustical Applications.

.2 N/A

.3 Canadian General Standards Board (CGSB)
  .1 CGSB 19-GP-5M- [1984] Sealant single component, acrylic-based, polymerization by evaporation of the solvent (April 1976 edition confirmed, incorporating the amending number 1).
  .2 CAN / CGSB-19.13- [M87], One-component, Elastomeric, Chemical Curing Sealant.
  .3 CGSB 19-GP-14M- [76] Sealant single component, based on butyl-polyisobutylene, curing by solvent evaporation (confirmation April 1976).
  .4 CAN / CGSB-19.17- [M90], One-component sealant based on an acrylic resin emulsion.
  .5 CAN / CGSB-19.24- [M90], Multi-component sealant, chemically polymerised.

.4 General Services Administration (GSA) - Federal Specifications (FS)
  .1 FS-SS-S-200- [E (2) 1993], Sealants, Joint, Two-Component, Jet-Blast-Resistant, Cold Applied, for Portland Cement Concrete Pavement.

.5 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
  .1 Material Safety Data Sheets (MSDS).

.6 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
  .1 SCAQ® Rule 1168- [A2005], Adhesives and Sealants Applications.

1.3 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents / Samples to be submitted.

.2 Data sheets
  .1 Submit product data and instructions and documentation concerning manufacturer of joint sealants. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.2 The manufacturer's data sheets should cover the following.
.1 Caulking products.
.2 The primaries.
.3 Sealants (all types), including their compatibility with each other.
.3 N/A

.3 Samples
.1 N/A
.2 If necessary, for the purpose of harmonization with adjacent materials, submit dried samples of sealants to be left exposed for each proposed color.

.4 Manufacturer's instructions
.1 The instructions submitted must relate to each of the products offered.

1.4 DOCUMENTS / ELEMENTS TO BE SUBMITTED TO THE COMPLETION OF WORK

.1 N/A

.2 Operations and maintenance sheets: provide operating and maintenance instructions, which will be incorporated into the E manual. and E.

1.5 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

.2 Delivery and acceptance: deliver the materials and equipment to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Warehousing and handling
.1 Store materials and equipment in a clean, dry, well-ventilated, frost-free area and in accordance with manufacturer's recommendations.
.2 Store products for sealing joints to protect against the brand s, scratches and scrapes.
.3 Replace damaged materials and equipment with new materials and equipment.

1.6 CONDITIONS OF IMPLEMENTATION

.1 Ambient conditions
.1 Proceed with the use of sealants only under the following conditions.
.1 Ambient and substrate temperatures are within the limits established by the product manufacturer or are greater than 4.4 degrees Celsius.
.2 The substrate is dry.
.3 The manufacturer's recommendations concerning the temperatures, relative humidity and moisture content of the substrate specific to the application and drying of sealants, as well as special instructions for the use of these, are respected.

.2 Width of joints
.1 Proceed with sealing products only when the joint width is greater than that established by the product manufacturer for the specified applications.

.3 Substrate
.1 Proceed with the sealant only after the substrate has been cleared of all contaminants that may prevent the adhesion of the products.

1.7 ENVIRONMENTAL REQUIREMENTS

.1 Meet the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding the use, handling, storage and disposal of hazardous materials and the labeling and provision of Material Safety Data Sheets recognized by Health Canada.

.2 Follow the manufacturer's recommendations for temperature, relative humidity and moisture content of the substrate for the application and drying of sealants, including special instructions for their use.

.3 Ventilate work areas as directed by the Departmental Representative, using approved portable blower and extractor fans.

2 PRODUCTS

2.1 PRODUCTS OF SEALING

.1 Caulking products that emit strong odors, contain toxic chemicals or are not certified to be of a mold-resistant type should not be used in air handling units.

.2 If you can not help but use toxic products, restrict their use to areas where fumes can be vented to the outdoors or where they will be confined behind a waterproofing system. air, or apply them several months before the place is occupied so as to allow evacuation of the fumes over the longest possible period.

.3 In the case of sealants approved with a primer, only the primer in question should be used with the sealant.

2.2 SEALANTS - DESCRIPTION

.1 OUTSIDE (not for windows): One-component, Moisture-Moist, Modified Polyurethane Sealant complies with CGSB Standard 19.13-M87, Class MC-2-25-BN and is resistant to corrosion. action of a ± 25% movement, such as **DYMONIC FC from TREMCO.** Color chosen by the Ministerial Representative.

.2 INSIDE (other than for windows): Quick drying latex acrylic sealant compliant with CGSB 19-GP-17M standard, such as Mulco Company's "Latex 10 Years" product.

.3 Joint bottoms must be compatible with sealants. Fund of preformed, compressible and non-compressible joints
- .1 Elements made of polyethylene foam, urethane, neoprene or vinyl.
  - .1 Filling rods made of extruded cellular foam.
  - .2 Oversized elements of 66%.
- .2 Neoprene or rubber-butyl elements.
  - .1 Round and full sticks with a Shore A hardness of 70.
- .3 Foam elements of high density.
  - .1 Extruded cellular PVC foam elements, extruded cellular polyethylene foam, having a Shore A hardness of 20 and having a tensile strength of 140 to 200 kPa, extruded polyolefin foam, having a density of 32 kg / m³, or in neoprene, of dimensions recommended by the manufacturer.
- .4 Anti-seizing tape.
  - .1 Polyethylene tape does not adhere to the sealant.

2.3 SEALANTS - LOCATIONS

.1 See Article 2.2 of this section

2.4 CLEANING PRODUCTS FOR JOINTS

.1 Non-corrosive and non-messy cleaning products compatible with the materials used in the seals and sealants, in accordance with the written recommendations of the sealant manufacturer.

.2 Primary: in accordance with the written recommendations of the manufacturer of sealants.

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions : Before proceeding with the installation of joint sealants, ensure that the condition of the surfaces / supports previously used under other sections or contracts is acceptable and allows the work to be carried out in accordance with the instructions written by the manufacturer.
- .1 Make a visual inspection of the surfaces / supports in the presence of the Ministerial Representative.
- .2 Inform the Ministerial Representative immediately of any unacceptable conditions found.
- .3 Begin installation work only after correcting unacceptable conditions and receiving written approval from the Departmental Representative.

3.2 SURFACE PREPARATION

.1 Check the dimensions of the joints to be made and the condition of the surfaces, in order to obtain a suitable width-depth ratio for the implementation of the joint bottoms and sealants.

.2 Clean the joint surfaces of any undesirable material, including dust, rust, oil, grease and other foreign matter that could affect the quality of the work.

.3 Do not apply sealants to joint surfaces that have been treated with a pore filler, hardener, water repellent, or other type of coating unless prior testing has confirmed compatibility. of these materials. Remove coatings already covering surfaces as needed.

.4 Make sure the joint surfaces are dry and not frozen.

.5 Prepare surfaces according to the manufacturer's instructions.

3.3 PRIMARY APPLICATION

.1 Before applying the primer and caulking, mask adjacent surfaces as needed to prevent soiling.

.2 Apply the primer to the side surfaces of the seals immediately before applying the sealant in accordance with the manufacturer's instructions.

3.4 INSTALLATION OF THE JOINT BOTTOM

.1 Lay anti-seizure tape where required, in accordance with the manufacturer's instructions.

.2 By compressing it by approximately 30%, install the bottom of the joint according to the desired depth and joint profile.

3.5 DOSAGE

.1 Mix the components strictly following the instructions of the manufacturer of the sealant.

3.6 IMPLEMENTATION

.1 Application of the sealant
- .1 Apply the sealant according to the manufacturer's written instructions.
- .2 In order to make clean joints, lay masking tape on the edge of the surfaces to be grouted.
- .3 Apply the sealant forming a continuous bead.
- .4 Apply sealant using a spray gun with a properly sized nozzle.
- .5 The supply pressure must be strong enough to fill the voids and seal perfectly.
- .6 Make joints to form a continuous sealing bead free of ridges, creases, sag, air voids and embedded dirt.
- .7 Before a skin forms on the joints, shape the apparent surfaces to give them a slightly concave profile.
- .8 Remove the excess sealant as work progresses and at the end of the work.

.2 Drying
.1 Dry and harden sealants according to the manufacturer's directions for these products.
.2 Do not cover joints made with sealants until they are dry.

3.7 CLEANING

.1 Cleaning during work: carry out cleaning work in accordance with section 01 74 11 - Cleaning.
.1 Leave the places clean at the end of each working day.
.2 Clean adjacent surfaces immediately.
.3 As work progresses, remove excess and burrs with sealant using recommended cleaners.
.4 Remove the masking tape at the end of the initial sealant setting period.

.2 Final cleaning: Evacuate surplus materials / equipment, waste, tools and equipment from site, in accordance with Section 01 74 11 - Cleaning.

.3 Waste management: sort waste according to section 01 74 21 - Management and disposal of construction / demolition waste.
.1 Remove bins and recycling bins from site and dispose of materials at appropriate facilities.

3.8 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repair damage to adjacent materials and equipment by installing joint sealants.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Section 08 80 50 Glazing
.2 Section 08 71 00 Hardware for Doors

1.2 REFERENCES

.1 American Architectural Manufacturers Association (AAMA)
  .1 AAMA 609 / 610-09, Cleaning and Maintenance Guide for Architectural Finished Aluminum.

.2 ASTM International
  .1 ASTM E 330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

.3 N/A

.4 Canadian General Standards Board (CGSB)
  .1 CGSB 1.40-97, for corrosion primer paint, alkyd resins, for structural steel.
  .2 CAN / CGSB-12.1-M90, safety glass, tempered or laminated.
  .3 CAN / CGSB-12.20-M89, Design rules for window glass for buildings.

.5 CSA International
  .1 CSA G40.20 / G40.21-F04 (C2009), General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steel.
  .2 CAN / CSA G164-FM92 (C2003), Hot dip galvanizing of irregularly shaped objects.

.6 Environmental Choice Program (ECP)
  .1 DCC-045-95, Sealants and caulking.

.7 N/A

.8 N/A

1.3 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents / samples according to section 01 33 00 - Documents / Samples to be submitted.

.2 Specifications
  .1 Submit the required data sheets and the manufacturer's instructions and documentation for the proposed doors and frames. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.3 Shop drawings

.1 Submitted shop drawings must bear the seal and signature of a qualified engineer qualified or licensed to practice in Canada, in the province of Quebec.

.2 The drawings must indicate the nature of the materials and the profile of the elements and show full-scale details of the components of each type of door and frame; they must also show or indicate the following.

.1 The details of the internal moldings and the junction with adjacent structures, on the outside.

.2 The junction details between multiple works.

.3 Elevated views of the structures.

.4 The bare thickness of the components.

.5 The type of surface finish and surfaces that are covered, the method of anchoring elements, the number of anchors, supports, reinforcements and accessories.

.6 The location of the sealing beads.

.7 The type and location of each door block.

.8 The arrangement of the reinforcing pieces for the realization of the joints and the assembly of the hardware elements.

.9 The layout of the hardware and the required clearances.

.4 N/A

.5 N/A

.6 N/A

1.4 DOCUMENTS / COMPLEMENTS TO COMPLETE THE WORK

.1 N/A

.2 Operation and Maintenance Sheets: Provide instructions for cleaning and maintenance of aluminum finishes, which will be incorporated into the E & E manual.

1.5 QUALITY ASSURANCE

.1 Certificates: submit documents signed by the manufacturer, certifying that the products, materials and equipment comply with the requirements regarding physical characteristics and performance criteria.

1.6 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with Section [01 61 00 - General Product Requirements] [and] [manufacturer's written instructions].

.2 Delivery and Acceptance: Deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Warehousing and handling
- .1 Store materials and equipment indoors, in a clean, dry, well-ventilated area as recommended by the manufacturer.
- .2 Store aluminum doors and frames to protect them from marks, scratches and scratches.
- .3 Replace damaged materials and equipment with new materials and equipment.

.4 N/A

.5 N/A

2 PRODUCTS

2.1 DESIGN CRITERIA

.1 Design Criteria for Doors and Racks Installed in Exterior Walls
- .1 Doors and frames must be able to expand and contract freely at service temperatures from -35 to +35 degrees Celsius.
- .2 The maximum deflection of the mullions shall not be greater than 1/175 of the free span when tested in accordance with ASTM E 330 under a wind load of 1.2 kPa.
- .3 Doors and frames must admit movement between their component parts.
- .4 Doors and frames must admit movement between their component parts and the frame of the rack or rack.

.2 The thickness of the glass and the dimensions of the glazing shall not exceed the limit values given in CAN / CGSB-12.20.

.3 SO

.4 Door units shall have an air and water vapor barrier system that is primarily aligned with the interior glazing and bead.

.5 **Model such as 5020 series from Alumico or approved equivalent.**

2.2 MATERIALS / MATERIALS

.1 Extruded aluminum profiles: AA alloy 6063 -T5, quality to be anodized, according to the Aluminum Association.

.2 Aluminum sheet: AA alloy 5005, with a minimum thickness of 2 mm for folding and 3 mm for quality coating panels to be anodized, according to the Aluminum Association.

.3 Steel reinforcing parts: in accordance with standard CSA G40.20 / G40.21, grade 300W.

.4 Fasteners: screws, bolts, nuts, fasteners, etc., used in the manufacture and installation of doors and frames will be of material compatible with aluminum:
- cadmium steel to join two pieces of aluminum;
- stainless steel to join a piece of aluminum to a piece of steel.

Parts in contact with the anchors will be suitably protected to prevent corrosion.

.5 Weatherstripping: Wool Pile on metal band.

.6 Door stops: black neoprene.

.7 Door sill cutter: Adjustable with anodised aluminum profile frame and vinyl sealing strip, recessed, with closed ends, with mechanism for automatic retraction when the door is open.

.8 Insulation plaster: bituminous paint

.9 Glass: see section 08 80 50 - Glazing.

.10 Glazing materials: see section 08 80 50 - Glazing.

.11 Sealants: color chosen by the Departmental Representative.
.1 VOC content: according SCAQMD Rule 1168.

2.3 ALUMINUM DOORS

.1 Doors: manufactured from hollow extruded profiles of at least 3 mm wall thickness.

.2 Amounts: Nominal width 127 mm, plus or minus 6 mm.

.3 Upper cross member : nominal width 127 mm, plus or minus 6 mm.

.4 Lower cross member: 190.5 mm nominal width , plus or minus 6 mm.

.5 Corner joints mechanically interlocked: reinforced for greater strength.

.6 Glazing bead: simply fastened in the case of glazing without sealant. Parcloses placed on the outside: inviolable type.

.7 Exterior doors: thermal break.

.8 Hardware parts: see section 08 71 00 Hardware for doors.

2.4 ALUMINUM BATIS

.1 See section 08 44 13 Glazed curtain walls with aluminum frame.

2.5 FINISHING ALUMINUM SURFACES

.1 Anodized finish: D e Light color No. 100 corresponding to the sample selected by the Departmental Representative.

.2 The appearance and characteristics of anodized finishes are those designated by the Aluminum Association as Class 1 and 2 architectural finishes, or as protective or decorative finishes.

2.6 FINISHING STEEL PARTS

.1 Staples and steel reinforcing of parts must be coated with primer for steel according to CGSB 1.40.
.1 Prim area: VOC content up to 250 g / L according to GS-11.

2.7 MANUFACTURING

.1 Doors and frames must be from the same manufacturer.

.2 Doors and frames must be manufactured to the maximum frontal dimensions and profiles shown. In the case of insulating glass units, the rebate must be at least 22 mm wide.

.3 If required, doors and frames shall be provided with reinforcing steel structural members.

.4 The joints of the elements must be tight and maintained by mechanical means.

.5 The fasteners must be concealed.

.6 To receive hardware, doors, frames, and reinforcements must be mortised, reinforced, drilled, and tapped where required, using the templates provided in Section 08. 71 00 - Hardware for doors.

.7 Aluminum surfaces in direct contact with dissimilar metal surfaces, concrete surfaces or masonry surfaces must be covered with an insulation coating.

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions: before proceeding with the installation of aluminum doors and frames, ensure that the condition of surfaces / supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out in accordance with the written instructions of the manufacturer.
  .1 Make a visual inspection of surfaces / media in the presence of the Ministerial Representative.
.2 Inform the Ministerial Representative immediately of any unacceptable conditions found.

.3 Begin installation work only after correcting unacceptable conditions and receiving written approval from the Departmental Representative.

3.2 INSTALLATION.

.1 Manufacturer's instructions: Comply with the manufacturer's written requirements, recommendations and specifications, including the technical bulletins and installation instructions specified in the product catalogs and packaging cartons, as well as the specifications in the data sheets.

.2 Install racks straight, square, level, at the correct height, and aligned with adjacent structures.

.3 Secure the frames securely.

.4 Install the doors and hardware according to the manufacturer's instructions and use the required templates.

.5 Adjust the door elements to ensure smooth operation.

.6 Leave the games necessary for the deformation of the frame to prevent its charges are transmitted to the door frames.

.7 Lay the glazing in accordance with section 08 80 50 - Glazing.

.8 Seal the joints to obtain weatherproof structures on the outside [and airtight and steam-tight on the inside].

.9 Apply sealant according to section 07 92 00 - Sealants for joints. The sealant must be concealed inside the aluminum structures, except where the Ministerial Representative allows it to be visible.

3.3 QUALITY CONTROL ON SITE

.1 Arrange for the manufacturer of the products provided under this section to review the work related to the handling, installation / application, protection and cleaning of the work, and to submit Written reports, in an acceptable format, that will verify if the work was done according to the terms of the contract.

.2 On-the-spot checks by the manufacturer: Retain the services of the manufacturer, who will make on-site recommendations for the use of the product (s), and make periodic visits to verify that the implementation has been carried out in accordance with his recommendations.

.3 Schedule site visits at the following steps.
- .1 Once the products are delivered and stored on site, and the preparatory work and other preliminary work completed, but before the start of the work of implementation of the work covered by this section.
- .2 Two (2) times during the progress of the works, that is to say once they have been completed at 25% then at 60%.
- .3 Once the work is done and the cleaning done.

.4 Obtain inspection reports within three (3) days of the site visit and submit for approval.

3.4 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.
- .1 Leave the places clean at the end of each working day.
- .2 Clean aluminum work as specified in AAMA 609.1 - Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum.
- .3 Upon completion of the installation of the doors and racks, proceed with site cleaning to remove accumulated dirt and debris from construction and the environment.
- .4 Clean aluminum surfaces with a damp cloth and approved non-abrasive cleaner.
- .5 Remove all traces of primer, caulk and sealant, epoxy resin and filler. Clean doors and racks.
- .6 Clean glazed surfaces with an approved non-abrasive cleaning product.

.2 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with section 01 74 11 - Cleaning.

.3 Waste management: sort waste for reuse and recycling in accordance with Section 01 74 21 - Management and disposal of construction / demolition waste.
- .1 Remove bins and recycling bins from site and dispose of materials at appropriate facilities.

3.5 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repair damage to adjacent materials and equipment by installing aluminum doors and frames.

TABLE OF DOORS AND FRAMES

LEGEND

AT :	Steel	B :	Wood
AL :	Anodized aluminum	NOT :	Nile
EXT :	Outside	P :	Painted
VT :	Heat-tempered glass		

For the hardware groups, see the specifications section 08 71 00

No. DOOR	OF THE ROOM	PIECE	DOOR							FRAME				Gr. Quinc.	Resist . fire	Note
			TYPE	MAST.	WIDTH.	UP.	PE.	GLASS	FINISHED	TYPE	MAST.	GLASS	FINISHED			
101	EXT.	101	1	AL	± 914	± 2260	45	VT	A L	-	A L	NOT	AL	01	NOT	3, 4
102	101	10 2	-	AT	-	-	-	-	P	-	AT	-	P	-	-	1
104-A	EXT.	104A	1	AL	2 X ± 914	± 2460	45	VT	AL	-	A L	NOT	AL	02	NOT	3,4
104-B	104A	104	-	AT	-	-	-	-	P	-	AT	-	P	-	-	2
105-A	EXT.	105	1	A L	914	± 2260	45	VT	AL	-	AL	NOT	AL	01	NOT	3, 4
105-B	105	106	-	AT	-	-	-	-	P	-	AT	-	P	-	-	1

NOTES :
1 : EXISTING DOOR PRESERVED TO BE PAINTED
2 : EXISTING DOOR PRESERVED TO MODIFY
3 : SEE SECTION 08 44 13 ALUMINUM CURTAIN WALLS FOR FRAMEWORK DESCRIPTION
4 : NEW DOOR IN EXIST OPENING. DIMENSIONS TO BE TAKEN ON THE SITE

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 08 11 16 - Aluminum doors and frames
.2 08 80 50 - Glazing
.3 07 92 00 - Joint Sealants

1.2 REFERENCES

.1 Aluminum Association (AA)
- .1 AA DAF 45-03 (R2009), Designation System for Aluminum Finishes.

.2 American Architectural Manufacturers Association (AAMA)
- .1 AAMA CW-10-04, Care and Handling of Architectural Aluminum from Shop to Site.
- .2 AAMA CW-11-85, Design Wind Loads and Boundary Layer Wind Tunnel Testing.
- .3 AAMA T1R-A1-04, Sound Control for Fenestration Products.
- .4 AAMA 501-05, Methods of Test for Exterior Walls.
- .5 AAMA 611-98, Voluntary Specifications for Anodized Finishes Architectural Aluminum.
- .6 AAMA 612-02, Voluntary Specifications, Performance Requirements, and Test Procedures for Combined Coatings of Anode Oxide and Transparent Organic Coatings on Architectural Aluminum.
- .7 AAMA 2603-02, Voluntary Specification Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
- .8 AAMA 2604-05, Voluntary Specification Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.

.3 ASTM International
- .1 ASTM AT 36 / A 36M-08, Specification for Carbon Structural Steel.
- .2 ASTM AT 123 / A 123M-09, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .3 ASTM AT 167-99 (2009), Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- .4 ASTM AT 653 / A 653M-09a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process.
- .5 ASTM B 209-07, Specification for Aluminum and Aluminum Alloy Sheet and Plate.
- .6 ASTM B 221-08, Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- .7 ASTM E 283- 04, Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Spectroscopy Under Pressure Differences Across the Specimen.

.8 ASTM E 330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls, by Uniform Static Air Pressure Difference.
.9 ASTM E 331-00 (2009), Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform Static Air Pressure Difference.
.10 ASTM E 413-04, Classification for Rating Sound Insulation.
.11 ASTM E 1105- 00 (2008) Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure gold Cyclic Difference.

.4 N/A

.5 Canadian General Standards Board (CGSB)
.1 CAN / CGSB 1.108-M89, Solvent-type bituminous paint.
.2 CAN / CGSB-12.20-M89, Design rules for window glass for buildings.

.6 CSA International
.1 CSA G40.20 / G40.21-F04 (C2009), General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steel.
.2 CSA S136-F07, North American Specification for the Calculation of Cold-formed Steel Structural Members.
.3 CAN / CSA-S157 / S157.1-05, Calculation of Mechanical Strength of Aluminum Elements / Comments on CAN / CSA-S157, Calculation of Mechanical Strength of Aluminum Elements.
.4 CSA W59.2- FM1991 (C2008), Welded aluminum construction.

.7 N/A

.8 N/A

.9 N/A

.10 N/A

1.3 ADMINISTRATIVE TERMS

.1 Coordinate the work described in this section with the installation of flashings and materials and components.

1.4 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Submittal procedures.

.2 Data sheets

.1 Submit the required data sheets as well as the instructions and documentation of the manufacturer regarding the components of the walls curtains, anchors and fixings, glass panels and filler panels, and details of the drainage system from e to. The data sheets must indicate product characteristics, performance criteria, dimensions, limits and finish and water flow patterns.

.3 Shop drawings

.1 Submitted shop drawings must bear the seal and signature of a qualified engineer qualified or licensed to practice in Canada, in the province.

.2 The shop drawings shall indicate, show or understand the dimensions of the curtain walls and inclined glazing systems, the requirements and tolerances for the bay frames, the adjacent structures, the details of the anchors, the sag under the effect of loads, related work affecting the progress of the structure, the water drainage system, the location and details of the contraction and expansion joints, and the welding work to be carried out on site.

.4 Samples

.1 N/A

.2 N/A

.3 Submit two (2) 300 mm x 300 mm samples showing prefinished aluminum surfaces, finish, color, texture, edges and angles of glassware material, prefabricated glass panels of the specified type and insulated filler panels.

.5 Design documents prepared by the designer in the service of the Contractor (delegated design).

.1 Specify the physical and structural properties of structural members, dimensional constraints, and special requirements for assembly.

1.5 DOCUMENTS / COMPLEMENTS TO COMPLETE THE WORK

.1 Submit the required documents / elements in accordance with section 00 21 15 - Additional general conditions.

.2 Operating and maintenance records: provide instructions for the operation and maintenance of the walls curtain x glazed aluminum frame, which will be incorporated into the E & E manual.

1.6 REPLACE MATERIALS / REPLACEMENT MATERIALS

.1 Materials / additional materials

.1 Include in the price of the bid to provide, at the end of the project, twenty-five (25) replacement parts for the various components of hardware, shutdown or mechanism cover

.2 Additional materials must be delivered in wooden crates and adequately protected for storage. Each cash register must be clearly identified.
.3 Deliver additional materials to the Departmental Representative upon completion of the work in this section.
.4 Store materials in the location indicated by the Departmental Representative.

1.7 QUALITY CONTROL

.1 All dimensions must be taken and verified on site by the contractor.
.2 The assembly of the frame and the tightness of the curtain walls with interlocking mullions must be done at the factory.

1.8 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance: Deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Warehousing and handling
.1 Perform the work specified in this section in accordance with AAMA CW-10.
.2 Store materials and materials so that they do not sit on the ground in a clean, dry, well-ventilated area as recommended by the manufacturer.
.3 Store glazed aluminum framed curtain wall components to protect them from marks, scratches and scratches.
.4 Protect the surfaces of pre-finished aluminum elements with protective packaging. Do not use adhesive papers or spray coatings that are very difficult to remove after exposure to the sun or the weather.
.5 Replace defective or damaged materials and equipment with new materials and equipment.

.4 N/A

.5 Packaging Waste Management: recover packaging waste for reuse as directed by the Construction Waste Management Plan in accordance with Section 01 74 21 - Management and disposal of construction / demolition waste

1.9 AMBIENT CONDITIONS

.1 Do not proceed with the installation of sealants when the ambient temperature and the surface temperature are below 5 degrees Celsius.

.2 Maintain the minimum temperature prescribed during the use of sealants and for at least 48 hours afterwards.

1.10 WARRANTY

.1 The Contractor hereby certifies that glazed aluminum frame curtain walls are warranted in accordance with GC 24 of the General Conditions, except for the warranty period of 60 months.

2 PRODUCTS

2.1 SYSTEM

.1 Description
- .1 Curtain wall vertical x glazed in aluminum frame, made of aluminum extrusions with thermal bridge with self-supporting framework, prefabricated in the workshop and prefinished factory; glass panes with windows; flashings and related anchoring and securing devices.
- .2 N/A
- .3 Assemblies allowing individual replacement of glazing (and filler panels) without removal of the mullions.

.2 **Model such as Alumico 6200 HP series or approved equivalent.**

2.2 MATERIALS / MATERIALS

.1 N/A
.2 Extruded aluminum: ASTM B 221.
.3 Aluminum sheet: according to ASTM standard B 209.
.4 Sheet steel: according to ASTM standard AT 653 / A 653M with zinc coating of at least 385g / m.ca.
.5 Pro steel wire: according to CSA G40.20 / G40.21, shaped to adapt to mullions.
.6 Anchors: three-axis adjustable devices made of hot dipped galvanized cast iron.
.7 Fasteners: stainless steel, same finish as the curtain wall.
.8 Bituminous paint: according to CAN / CGSB 1.108, not containing solvent.
.9 Vertical glazing
- .1 According to the requirements of section 08 80 50 - Glazing.

.10 N/A
.11 Sealants
- .1 As per Section 07 92 00 - Joint Sealants.

2.3 INGREDIENTS

.1 Mullioned
- .1 Vertical elements: nominal dimensions of 65 mm x 100 mm with cap 65mm x 50 mm.
- .2 Horizontal elements: nominal dimensions of 65 mm x 100 mm with cap 65mm x 50 mm.
- .3 Thermal break with internal tubular sections insulated from the external support plates.
- .4 Glazing bones to match the backing plates, all of sufficient size and strength to ensure proper grip on the glazing and filler panels.

.5 Evacuation holes, baffles and internal flashings adapted to the internal drainage system.
.6 Baffles placed in the mullions and eliminating the chimney effect, or draft effect, created by the circulation of air in the interior voids.

.2 Extruded aluminum carriages
.1 Quality 1100-H14, 2mm with joint covers, deflectors and weep holes.
.2 Finished harmonizing with the materials constituting the mullions of the curtain wall.
.3 Secured by means of appropriate concealed fasteners.

.3 N/A

.4 N/A

.5 N/A

.6 N/A

.7 Flashings: aluminum 3.2 mm thick, with finish to match the materials constituting the curtain wall mullions of when apparent, and secured by means of fasteners concealed.

.8 N/A

.9 N/A

.10 N/A

.11 Vapor Barrier / Air Barrier: See drawings.

2.4 ASSEMBLY

.1 The system components must be assembled with minimum clearance, also by means of shims at the perimeter of the elements, so as to allow the installation and the dynamic movements of the peripheral seals.

.2 The joints and angles of the elements must be accurately adjusted and securely fastened. The joints must be tight, flush and weatherproof.

.3 The elements must be prepared to receive the anchoring devices, after which they must be installed.

.4 Fixing devices and accessory parts must not be visible.

.5 The components of the systems must be ready to receive the exterior doors and hardware parts are prescribed in section s 08 11 16 and 08 71 00.

.6 N/A

.7 Bearing frames must be reinforced to withstand external loads.

.8 Manufacturers' labels should not be visible once the work is completed.

.9 N/A

.10 Finish
- .1 Finishing coatings: according to the designation AA.
- .2 Exposed exterior and interior aluminum surfaces : 215-R1 anodized AA finish, Light 0.58, 0.7 mils thick, with mechanical treatment M12 and chemical C 22 preliminary.
- .3 Exposed exterior and interior aluminum surfaces : previously AA treated, with fluoropolymer coating of the selected color.
- .4 Concealed aluminum and steel surfaces that come into contact with materials containing hydraulic binders or materials of dissimilar nature shall be coated with one (1) coat of bituminous paint in accordance with ONGC1-GP-108c Type 2.

2.5 QUALITY CONTROL AT SOURCE

.1 The work must be g be executed according to standard GSM A WADA-1, including a (1) copy must be kept on site.

.2 Manufacturer's Qualification: A firm with at least three (3) years of experience, with supporting references, in the manufacture of the products covered by this section.

.3 Qualification of the installer: a company specialized in the execution of the works covered by this section and having at least three (3) years of experience supporting references and approved by the fabric ant.

.4 Supporting structural members shall be calculated in accordance with CAN / CSA-S157, under the direct supervision of a recognized structural engineer in the Province with experience in the calculation of this type of structure.

.5 Welding work must be performed in accordance with CSA W59.2.

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions: Before proceeding with the installation of glazed aluminum-framed curtain walls, ensure that the condition of surfaces / supports previously implemented under other sections or contracts is acceptable and achieves the work in accordance with the written instructions of the manufacturer.

.1 Perform a visual inspection of surfaces / media in the presence of the Departmental Representative.

.2 Check the dimensions, tolerances and how the elements are fastened to other structures.

.3 Verify that openings in walls and adjacent air and vapor barriers are ready to receive the items covered by this section.

.4 Inform the Departmental Representative immediately of any unacceptable conditions identified.

.5 Start installation work only after correcting unacceptable conditions and receiving written approval from Departmental Representative.

3.2 SETTING UP

.1 Perform the installation of the walls curtains in accordance with the manufacturer's instructions.

.2 Fasten the walls framing curtains to allow for the necessary adjustments to account for construction tolerances and other identified deviations.

.3 Use alignment accessories and shims to permanently fix the systems to the building structure. Clean the surfaces where welding has been done, and apply a primer to welds made on site and surrounding surfaces.

.4 Erect plumb and level joints so that they are free from twisting and warping. Preserve the dimensional tolerances of assemblies and align them to adjacent structures.

.5 Provide and install thermal insulation where components pass through building insulation or break continuity.

.6 N/A

.7 N/A

.8 N/A

.9 Coordinate the installation of accessory parts and air barrier and vapor barrier seals.

.10 Fill the voids where shims are placed around the joints to fill fibrous insulating materials to ensure the continuity of the thermal barrier.

.11 N/A

.12 N/A

.13 Install fences, closure plates, associated flashings and louvers. Adjust the closure plates without leaving gaps around the air ducts.

.14 N/A

.15 Apply the sealant around the elements according to the method that will meet the specified performance criteria. Sealants, support materials and parameters governing their placement must be in accordance with Section 07 92 00 - Sealants for joints.

3.3 TOLERANCES OF ASSEMBLY ON SITE

.1 Maximum deviation from vertical: the lesser of the following values, a non-cumulative deviation of 1.5 mm per meter or 12 mm per 30 meters.

.2 Maximum misalignment between two abutting elements in the same plane: 0.8 mm.

.3 Maximum width of the void to be filled with sealant between the curtain wall and the adjacent structure: 13 mm.

3.4 QUALITY CONTROL ON SITE

.1 N/A

3.5 ADJUSTMENT

.1 N/A

3.6 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.
- .1 Leave the places clean at the end of each working day.
- .2 Remove protective coatings from pre-finished aluminum surfaces.
- .3 Wash surfaces with a solution of mild detergent and lukewarm water, using clean, non-rough cloths. Take care to remove the dirt accumulated in the corners and then wipe the surfaces well.
- .4 Remove excess sealants with some mineral spirits or other solvent acceptable to the sealant manufacturer.
- .5 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with section 01 74 11 - Cleaning.

.2 Waste management: sort waste for reuse and recycling in accordance with Section 01 74 21 - Management and disposal of construction / demolition waste.

.1 Remove bins and recycling bins from site and dispose of materials at appropriate facilities.

3.7 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repairing damage to adjacent materials and equipment by installing glazed aluminum frame curtain walls.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 08 11 16 - Aluminum doors and frames

1.2 REFERENCES

.1 ANSI / BHMA A156.1-2000, American National Standard for Butts and Hinges.
.2 ANSI / BHMA A156.2-2003, Bored and Preassembled Locks and Latches.
.3 ANSI / BHMA A156.3-2001, Exit Devices.
.4 ANSI / BHMA A156.4-2000, Door Controls - Closers.
.5 ANSI / BHMA A156.5-2001, Auxiliary Locks and Associated Products.
.6 ANSI / BHMA A156.6-2005, Architectural Door Trim.
.7 ANSI / BHMA A156.8-2005, Door Controls - Overhead Stops and Holders.
.8 ANSI / BHMA A156.10-1999, Power Operated Pedestrian Doors.
.9 ANSI / BHMA A156.12-2005, Interconnected Locks and Latches.
.10 ANSI / BHMA A156.13-2002, Mortise Locks and Latches Series 1000.
.11 ANSI / BHMA A156.14-2002, Sliding and Folding Door Hardware.
.12 ANSI / BHMA A156.15-2006, Release Devices - Closer Holder, Electromagnetic and Electromechanical.
.13 ANSI / BHMA A156.16-2002, Auxiliary Hardware.
.14 ANSI / BHMA A156.17-2004, Self-closing Hinges and Pivots.
.15 ANSI / BHMA A156.18-2006, Materials and Finishes.
.16 ANSI / BHMA A156.19-2002, Power Assist and Low Power Energy - Operated Doors.
.17 ANSI / BHMA A156.20-2006, Strap and Tee Hinges and Hasps.
.18 Canadian Steel Door and Frame Manufacturers' Association (CSDMA) / Association of Canadian door manufacturer of steel (ACFPA)
  .1 CSDMA / ACFPA, Recommended Dimensional Standards for Commercial Steel Doors and Frames - 2009.

1.3 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Submittal procedures.

.2 Data sheets
  .1 Submit the required data sheets as well as the manufacturer's instructions and documentation concerning hardware for doors. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.3 Samples
  .1 Submit a sample of each type of hardware item for review and acceptance.
  .2 The samples will be given to the Contractor, who will have to incorporate them into the work.
  .3 Place on each sample a label indicating the corresponding paragraph of the specifications, the number and the trade-mark, the finish and the lot number of the hardware.

.4 Once the samples have been approved, they will be returned to the Contractor, who will have to incorporate them into the work.

.4 List of hardware items
.1 Submit a list of hardware items for doors.
.2 The list must list the prescribed hardware and indicate the make, model, material, function and finish, as well as any other relevant information.

.5 Test reports: submit test reports certifying that products and materials comply with the physical characteristics and performance requirements.

.6 Manufacturer's Instructions: Submit installation instructions provided by the manufacturer.

1.4 DOCUMENTS / COMPLEMENTS TO COMPLETE THE WORK

.1 Submit the required documents / elements.

.2 Operation and Maintenance Records: Provide instructions for the operation and maintenance of door hardware, which will be incorporated into the E & E manual.

1.5 REPLACE MATERIALS / REPLACEMENT MATERIALS

.1 Materials / additional materials
.1 Provide materials and replacement / maintenance materials required.
.2 Tools
.1 Provide (2) two sets of keys needed for the maintenance of door closers, locks and accessories for exit doors.

1.6 QUALITY ASSURANCE

.1 Regulatory Requirements
.1 Exterior exit door hardware (door exit) and doors mounted in firewall must be certified by a Canadian Standards Council accredited certification body.

.2 Certificates: submit documents signed by the manufacturer, certifying that the products and materials comply with the physical characteristics and performance criteria.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with the manufacturer's instructions.

.2 Delivery and Acceptance: Deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Wrap hardware items, including fasteners, separately or in groups of similar items, and label each package according to the nature and purpose of the item.

.4 Warehousing and handling
.1 Store materials and equipment indoors, in a clean, dry, well-ventilated area as recommended by the manufacturer.
.2 Store door hardware to protect it from marks, scratches and scratches.
.3 Protect finished surfaces with protective packaging or peelable film.
.4 Replace damaged materials and equipment with new materials and equipment.

2 PRODUCTS

2.1 GENERAL

.1 All items of the same type must be from the same manufacturer.

2.2 HARDWARE ARTICLES FOR DOORS

.1 N/A

2.3 MISCELLANEOUS HARDWARE ARTICLES

.1 N/A

2.4 ATTACHMENTS

.1 Only fasteners supplied by the manufacturer may be used. Failure to comply with this requirement may compromise the warranties and invalidate the certification labels, if applicable.

.2 Provide screws, bolts, expansion plugs and other fasteners necessary for satisfactory fastening and proper operation of hardware.

.3 Exposed fasteners must have the same finish as the installed hardware item.

.4 Where a pull handle is required on one side and a push plate on the other side of the doors, provide the necessary fasteners and install them so that the handle is secured from one side to the other. the door. The plate must be laid in such a way that the fasteners are hidden.

.5 Use fasteners made of material compatible with the one they pass through.

2.5 KEYS

.1 Padlocks and locks for cabinets and doors must be ordered by keys as per the list of hardware items. Prepare a detailed list of keys in collaboration with the Ministerial Representative.

.2 Provide three (3) keys for each lock provided for under this contract.

.3 N/A

.4 Stamp lock code numbers on keys and barrels.

.5 N/A

.6 N/A

3 EXECUTION

3.1 INSTALLATION

.1 Manufacturer's instructions: Comply with the manufacturer's written requirements, recommendations and specifications, including the technical bulletins and installation instructions specified in the product catalogs and packaging cartons, as well as the specifications in the data sheets.

.2 Provide manufacturers of doors and metal frames with installation templates and complete instructions to prepare their products to receive the hardware items specified in this section.

.3 Provide, with each hardware item, the manufacturer's installation instructions.

.4 Install standard hardware items in accordance with the requirements of the Canadian Metric Guide for Steel Doors and Frames (Modular Construction), developed by ACFPA.

.5 If the installation is such that the stopper will touch the handle, install the stopper so that it hits the bottom.

.6 Install a key control cabinet.

.7 Use only fasteners provided by the manufacturer.
.1 Quick fasteners, unless specifically provided by the manufacturer, will not be accepted.

.8 When the Customer Representative requests it, remove the temporary rotors from the locks.
.1 Replace the temporary rotors with permanent rotors, then check the operation of all locks.

3.2 SETTING

.1 Adjust hardware, operating and control devices and door closers to ensure smooth operation, safety, and tight sealing.

.2 Lubricate hardware, operating and control devices and all moving parts.

.3 Adjust door hardware to ensure perfect contact between doors and their frames.

3.3 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.
- .1 Leave the places clean at the end of each working day.
- .2 Clean hardware with a damp cloth and non-abrasive cleaner and polish according to the manufacturer's instructions.
- .3 Remove the protective film covering the hardware, if applicable.
- .4 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with section 01 74 11 - Cleaning.

3.4 DEMONSTRATION

.1 N/A

.2 Information given to maintenance staff
- .1 Give maintenance staff the necessary information on the following.
  - .1 Proper methods of cleaning and maintenance of hardware items.
  - .2 Features, function, handling and storage of keys.
  - .3 Function, handling and storage of keys used to adjust door closers, locks and hardware for exit doors.

.3 Demonstrate the operation of the elements, as well as adjustment and lubrication characteristics.

3.5 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repair damage to adjacent materials and equipment by installing door hardware.

3.6 LIST OF HARDWARE ITEMS:

GROUP: 01

DOOR(S):

101 105-A

QTY.	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	HINGE CONTINUES	112XY	628	IVE
1	DOUBLE CYLINDER LOCK	L9082T LLL XL11-422	626	SCH
2	PERMANENT CORE PRIMUS	20-740-XP	626	SCH
1	ELECTRIC STRIKE	6211 FSE DS CON	630	VON
1	GUARD BOLT	LG14	630	IVE
1	ENS. PUSH / PULL HANDLES	9190EZHD-305MM-NO	630-316	IVE
1	STOP ARM	100S ADJ	630	GLY
1	OPERATOR AND ACCESSORIES	EXISTING TO KEEP	689	EXI
1	COLD CUT	BY MFR WALL RIDEAU	628	BYO
1	BROKEN X WATER DISCHARGE	8198AA	AA	RSA
1	BREAK THERMAL THRESHOLD	626A-223	AT	RSA
1	POWER BOX	EXISTING TO KEEP		EXI

NOTE (S):
DOOR 101 IN INTERLOCK WITH DOOR 102
DOOR 105 AND 105A IN INTER-LOCK WITH DOOR 105B

GROUP: 02

DOOR(S):

104-A

QTY.	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	HINGE CONTINUES	112XY	628	IVE
1	ANTI-PANIC LOCK	CD-9849-EO	626	VON
1	ANTI-PANIC LOCK	CD-9849-NL-OP-110MD	626	VON
1	RIM CYLINDER	20-057	626	SCH
3	PERMANENT CORE PRIMUS	20-740-XP	626	SCH
2	MORTISE CYLINDER	26-091 ICX XQ11-948	626	SCH
2	HANDLE TO BE FIRED	8190EZHD 305MM O	630-316	IVE
2	STOP ARM	100S ADJ	630	GLY
1	CLOSE DOOR	4040XP	689	LCN
1	OPERATOR AND ACCESSORIES	EXISTING TO KEEP	689	EXI
1	MOUNTING PLATE	4040XP-18G	689	LCN
1	COLD CUT	BY MFR WALL RIDEAU	628	BYO
2	BROKEN X WATER DISCHARGE	8198AA	AA	RSA
1	THRESHOLD	6575A-NH	AT	RSA
1	POWER BOX	EXISTING TO KEEP		EXI
1	KEY SWITCH	EXISTING TO KEEP		EXI

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 08 11 00 - Metal doors and frames
.2 08 44 13 - Glazed aluminum curtain walls
.3 08 50 00 - Windows

1.2 REFERENCES

.1 ASTM International
- .1 ASTM C 542 -05, Standard Specification for Lock-Strip Gaskets.
- .2 ASTM D 790-07e1, Standard Test Methods for Structural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- .3 ASTM D 1003-07e1, Standard Test Method for Haze and Luminous Transmittance of Plastics.
- .4 ASTM D 1929-96 (R2001) e1, Standard Test Method for Determining Ignition Temperature of Plastics.
- .5 ASTM D 2240-05, Standard Test Method for Rubber Property - Durometer Hardness.
- .6 ASTM E 84-10, Standard Test Method for Surface Burning Characteristics of Building Materials.
- .7 ASTM E 330-02, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- .8 ASTM F 1233-08, Standard Test Method for Security Glazing Materials and Systems.

.2 Canadian General Standards Board (CGSB)
- .1 CAN / CGSB-12.1- M90, Tempered or laminated safety glass.
- .2 CAN / CGSB-12.2-M91, Flat and Clear Glass.
- .3 CAN / CGSB-12.3-M91, Float glass, flat and clear.
- .4 CAN / CGSB-12.4-M91, Heat absorbing glass.
- .5 CAN / CGSB-12.6-M91, Transparent Mirrors (in one direction).
- .6 CAN / CGSB-12.8-97, Insulating glazing.
- .7 CAN / CGSB-12.8-97 (Amendment), Insulating glazing.
- .8 CAN / CGSB-12.9-M91, Tympanic Glass.
- .9 CAN / CGSB-12.10-M76, Reflective Glass.
- .10 CAN / CGSB-12.11-M90, Armored Safety Glass.
- .11 CAN / CGSB-12.12-M90, Plastic Safety Glazing Panels.
- .12 CAN / CGSB-12.13-M91, pattern glass.

.3 Environmental Choice Program (ECP)
- .1 DCC-045-95 (R2005), Sealants and Caulking.

.4 Glass Association of North American (GANA)
- .1 GANA Glazing Manual - 2008.
- .2 GANA Laminated Glazing Reference Manual - 2009.

.5 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
- .1 SCAQ® Rule 1168 -A2005, Adhesives and Sealants Applications.

1.3 ADMINISTRATIVE TERMS

.1 N/A

.2 Prior to the start of the work, make the necessary arrangements with the Departmental Representative to review the existing conditions near the location of the planned demolition work.

.3 N/A

.4 Ensure the presence of all key personnel.

.5 N/A

1.4 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents / Samples to be submitted.

.2 Data sheets
.1 Submit the required data sheets and the manufacturer's instructions and documentation for glazing, sealants and glazing accessories. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.3 Shop drawings
.1 The submitted shop drawings must bear the seal and signature of a qualified engineer recognized or licensed to practice in Canada, in the province of Quebec.

.4 Samples
.1 Submit samples of each type of glazing unit for review and acceptance.
.2 The samples will be given to the Contractor, who will have to incorporate them into the work.
.3 Submit two (2) 300x300mm samples and sealants.

.5 Certificates: submit the documents signed by the manufacturer, certifying that the products, materials and equipment comply with the requirements regarding physical characteristics and performance criteria.

.6 Test reports: submit test reports certifying that the products, materials and equipment comply with the physical characteristics and performance criteria.

1.5 DOCUMENTS / ITEMS TO BE GIVEN TO ACH E COMPLETION OF WORK

.1 N/A

.2 Operation and maintenance sheets: provide instructions for use and maintenance glazing, which will be incorporated into the E & E manual.

1.6 QUALITY ASSURANCE

.1 Certificates: submit the documents signed by the manufacturer, certifying that the products, materials and equipment comply with the requirements regarding physical characteristics and performance criteria.

.2 Samples of the book
- .1 Make the samples of the required work.
- .2 Samples must understand the glazing itself, glass, and peripheral gaskets sealing to air and water vapor.
- .3 The samples will be used for the following purposes.
  - .1 To evaluate the quality of execution of the works, the preparation of the support / substrate, the operation of the material and the implementation of the materials.

.4 Make the samples of the work at the places indicated.

.5 Before starting work, allow 24 hours for the inspectors to inspect the samples.

.6 Once accepted, the samples will be the minimum standard for the work. They can be integrated into the finished work. Remove samples and dispose of materials when no longer needed and when requested by the Departmental Representative.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with the manufacturer's instructions.

.2 Delivery and Acceptance: Deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 Warehousing and handling
- .1 Store materials and equipment indoors, in a clean, dry, well-ventilated area as recommended by the manufacturer.
- .2 Store windows and frames to protect them from marks, scratches and scratches.
- .3 Protect the surfaces of prefinished aluminum elements with protective packaging or peelable film.
- .4 Replace damaged or defective materials and equipment with new materials and equipment.

1.8 AMBIENT CONDITIONS

.1 Ambient conditions
- .1 Glazing sealants should be operated at an ambient temperature of at least 10 degrees Celsius. In addition, the area where the work is carried out must be ventilated for 24 hours after the installation of these sealants.

.2 Ensure that the prescribed minimum temperature is obtained prior to commencement of work, and maintain it during glazing sealant application for a period of 24 hours after completion of the work.

2 PRODUCTS

2.1 MATERIALS / MATERIALS

.1 Design criteria

.1 Comply with the following requirements for glazing and glass materials to ensure the continuity of the air and water vapor barrier system of the building envelope.

.1 The inner pane of multiple sealed glazings shall ensure the continuity of the air and water vapor barrier system.

.2 Glazing dimensions shall be determined to withstand permanent loads, wind loads, wind pressure and suction forces in accordance with ASTM E 330.

.3 The maximum bending of the glazing must not exceed the limit resistance to the bending of the glass, and this deformation must not in any way alter the physical properties of the glass materials.

.2 N/A

.3 Insulating glass

Sealed thermos glass units

- Total thickness of the unit = 25.4mm.
- Outside glass: Laminated glass 8 mm
  (4mm clear toughened PVB + 060 " + 4mm clear Low-E Face 2 tempered)
  Air space « argon "Thermaledge with infill of" Airmax "black.
  Inner glass: Laminated glass (4mm clear tempered + PVB.060 " + 4mm clear tempered)
- All accessories, thermal breaks, screws, caulking, etc. for a complete installation. All materials must come from the same company and be compatible.

.4 N/A

.5 Sealants:

.1 Only products that are on the list of approved products published by the CGSB are acceptable for this work.

.2 Glazing putty: oil-based, in accordance with CAN / CGSB-19.6, type 1, color chosen by the Departmental Representative.

.3 Sealant: one-component sealant, compliant with CAN / CGSB-19.13, applicable to the spray gun, color chosen by the Departmental Representative,

.4 Sealers and cleaning products: in accordance with the standards of the glass manufacturer.

2.2 ACCESSORIES

.1 Seat blocks: Neoprene, hardness Shore Durometer measured according to ASTM D 2240, with a length of at least 100 mm x the width of the groove of the glazing, minus 1.5 mm x the height.

.2 Peripheral wedges: Neoprene, hardness Shore Durometer measured according to ASTM D 2240, self-adhesive on one side, 75 mm long x 2.4mm thick x 9mm high.

.3 Preformed adhesive tapes for glazing
.1 Compound premolded butyl, a Shore A hardness A of 10 to 15 measured with the durometer according to the ASTM standard D 2240, rolled on back paper, 12.7 mm wide min. black color.
.2 N/A

.4 Glazing bead: resilient, silicone, extruded to fit the rebate, color chosen by the Ministerial Representative.

.5 Extruded joints with blocking tabs: according to ASTM standard C 542.

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions: Before proceeding with the installation of glazing, ensure that the condition of the surfaces / supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out in accordance with the written instructions of the maker.
.1 Make sure that openings for glazing are well dimensioned and that they comply with tolerances.
.2 Make sure that the surfaces of the rabbets and other recesses are clean and free of obstruction, and that they are ready to receive glazing.
.3 Visually inspect surfaces / supports in the presence of the Departmental Representative.
.4 Inform the Ministerial Representative immediately of any unacceptable conditions found.
.5 Begin installation work only after correcting unacceptable conditions and receiving written approval from the Departmental Representative.

3.2 PREPARATION

.1 Clean the contact surfaces with a solvent and dry with a cloth.

.2 Seal rebates and other porous recesses with primer paint or media compatible printing product.

.3 Apply a primer / primer paint to the surfaces to be covered with a sealant.

3.3 EXTERIOR GLAZING - ASSEMBLY WITHOUT MASTIC BATH (PRE-FORMED ADHESIVE BANDS)

.1 N/A

3.4 EXTERIOR GLAZING - MIXED MOUNTING (ADHESIVE BANDS / SEALING MASTIC)

.1 N/A

3.5 EXTERIOR GLAZING - MOUNTING IN MASTIC BATH (SEALANT / SEALANT)

.1 N/A

3.6 INTERIOR WINDOWS - ASSEMBLY WITHOUT MASTIC BATH (ADHESIVE BANDS / ADHESIVE BANDS)

.1 N/A

3.7 INTERIOR WINDOWS - MIXED MOUNTING (ADHESIVE BANDS / SEALING MASTIC)

.1 N/A

3.8 INTERIOR WINDOWS - MOUNTING IN POTTING BATH (SEALING / SEALING)

.1 N/A

3.9 MIRRORS

.1 N/A

3.10 FILMS OF PLASTIC MATERIAL

.1 N/A

3.11 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.
  .1 Leave the places clean at the end of each working day.
    .1 Remove all traces of primer and printing, caulking and waterproofing products.
    .2 Clear finished surfaces of putty and other glazing materials.
    .3 Remove all tags once work is complete.
    .4 Clean the glazing with a non-abrasive product according to the manufacturer's instructions.

.2 Final cleaning: remove surplus materials, rubbish, tools and equipment as per section 01 74 11 - Cleaning.

3.12 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Once the installation is complete, mark each glazing with a " X Using a paste or a removable plastic tape.
.1 Do not mark reflective glass panels or heat absorbing glass.

.3 Repair damage to adjacent materials and equipment by glazing installation.

3.13 LISTS

.1 N/A

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 Not applicable

1.2 REFERENCES

.1 Aluminum Association (AA)
- .1 AA DAF 45-03 (R2009), Designation System for Aluminum Finishes.

.2 ASTM International
- .1 ASTM C 475-02 (2007), Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- .2 ASTM C 514-04 (2009e1), Standard Specification for Nails for the Application of Gypsum Board.
- .3 ASTM C 557-03 (2009) e1, Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
- .4 ASTM C 840-08, Standard Specification for Application and Finishing of Gypsum Board.
- .5 ASTM C 954-07, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
- .6 ASTM C 1002-07, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products Gold Metal Plaster Bases to Wood Studs Gold Steel Studs.
- .7 ASTM C 1047-09, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
- .8 ASTM C 1280-99, Standard Specification for Application of Gypsum Sheathing.
- .9 ASTM C 1177 / C 1177M-08, Standard Specification for Glass Matte Gypsum Substrate for Use as Sheathing.
- .10 ASTM C 1178 / C 1178M-08, Standard Specification for Glass Mat Water Resistant Gypsum Backing Board.
- .11 ASTM C 1396 / C 1396M-09a, Standard Specification for Gypsum Wallboard.

.3 Association of the Wall and Ceiling Industries International (AWCI)
- .1 AWCI Levels of Gypsum Board Finish-97.

.4 N/A

.5 General Office of Standards Canada (CGSB)
- .1 CAN / CGSB-51.34-M86 (C1988), Polyethylene Sheet Vapor for Buildings.
- .2 CAN / CGSB-71.25-M88, Adhesive for bonding prefabricated panels to wood framing and metal studs.

.6 N/A

.7 N/A

.8 Underwriters Laboratories of Canada (ULC)
.1 CAN / ULC-S102-07, Standard Method of Test - Surface Burning Characteristics of Building Materials and assemblies.

1.3 DOCUMENTS / SAMPLES SUBMITTALS / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents / Samples to be submitted.

.2 Data sheets
.1 Submit the required data sheets as well as the manufacturer's instructions and documentation for plasterboard linings. The data sheets must indicate the characteristics of the products, the performance criteria, the dimensions, the limits and the finish.

.3 Samples
.1 Submit samples of each type of gypsum board and samples of 300 mm long corner protrusions and flange trim for review and acceptance.
.2 The samples will be given to the Contractor, who will have to incorporate them into the work.
.3 N/A

.4 N/A

1.4 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle materials and equipment in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance: Deliver materials and materials to the work site in their original packaging, which must be labeled with the name and address of the manufacturer.

.3 N/A

.4 N/A

.5 N/A

1.5 AMBIENT CONDITIONS

.1 Maintain the ambient air temperature to at least 10 degrees Celsius and not more than 21 degrees Celsius, for 48 hours prior to laying and grouting plasterboard, during installation and grouting, and for at least 48 hours after completion of joints.

.2 Install drywall and grout on dry, non-frosted surfaces.

.3 Provide good ventilation in plasterboard-lapped areas of the building to remove excessive moisture that may prevent drying of the grout immediately after application.

2 PRODUCTS

2.1 MATERIALS / MATERIALS

.1 Standard plates: ASTM compliant C 1396 / C 1396M, ordinary type, 12.7 mm thick and type X, 15.8mm thick, 1200 mm width and maximum working length, with squared edges at the ends and canted edges at the sides.

.2 Intermediate sheathing plates: ASTM compliant C 1396 / C 1396M, ordinary type, 12.7 mm thick and type X, 15.8 mm thick, from 1200 mm width and the maximum usable length.

.3 N/A

.4 N/A

.5 N/A

.6 N/A

.7 N/A

.8 N/A

.9 Metal furring profiles, suspensions, wires, inserts and anchors: as recommended by the manufacturer.

.10 Drywall furring profiles: Galvanized steel, 0.5 mm thick core, allowing the fixing of plasterboards by means of screws.

.11 Flexible furs for drywall: made of galvanized steel, with a core thickness of 0.5 mm, allowing flexible fixing of plasterboard.

.12 Nails: ASTM compliant C 514.

.13 Steel drill bits: ASTM compliant C 1002.

.14 Adhesive for uprights: in accordance with CAN / CGSB-71.25 ASTM C 557.

.15 Laminating adhesive: according to the manufacturer's recommendations, without asbestos.

.16 Flush moldings, corner reinforcements, shrink joints and curbs: ASTM compliant C 1047, electroplated galvanized metal with perforated wings, in one piece.

.17 N/A

.18 N/A

.19 N/A

.20 N/A

.21 Polyethylene: in accordance with CAN / CGSB-51.34, type 2.

.22 Insulating tape: rubberized, water repellent, in open-cell neoprene, 3 mm thick, 12 mm wide, one side of which is coated with a permanent self-adhesive, of suitable length.

.23 Joint Paste: ASTM compliant C 475, without asbestos.

2.2 FINISH

.1 Textured finish: Non-asbestos-free, standard white, asbestos -based primer and sealer, in accordance with the plasterboard manufacturer's recommendations.
.1 N/A

3 EXECUTION

3.1 EXAMINATION

.1 Verification of conditions: Before proceeding with the installation of plasterboard liners, ensure that the condition of surfaces / supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out in accordance with written instructions from the manufacturer.
.1 Make a visual inspection of the surfaces / supports in the presence of the Ministerial Representative.
.2 Inform the Ministerial Representative immediately of any unacceptable conditions found.
.3 Begin installation work only after correcting unacceptable conditions and receiving written approval from the Departmental Representative.

3.2 MOUNTING

.1 Unless otherwise specified, install and finish plasterboard linings in accordance with ASTM C840.

.2 Install coatings in accordance with ASTM C 1280.

.3 Unless otherwise specified, suspend suspensions and load-bearing profiles for gypsum board suspended ceilings in accordance with ASTM C 840.

.4 N/A

.5 Install the level elements, the allowable gap being 1: 1200.

.6 Frame furring profiles with openings housing the panels, lighting fixtures, diffusers, grilles, etc.

.7 Install 19mm x 64mm furring profiles all along the sand pit at the exact location of the top of the metal stud walls.

.8 Install furs for the fastening of plasterboards constituting the cladding of vertical partitions up to the suspended ceiling or true ceiling, as the case may be.

.9 According to the indications, furs are placed above suspended ceilings to carry the fire and acoustic screens made of plasterboard, and to form plenums.

.10 Unless otherwise specified, apply wall furring to secure gypsum board in accordance with ASTM C 840.

.11 Lay furs around openings in the building and around built-in hardware, cabinets, signs, etc. Extend the furs in the plays. Consult with the equipment suppliers regarding the games and clearances required.

.12 Where indicated, lay furring around conduit ducts, beams, columns, piping or all visible utilities.

.13 Lay the flexible furrings perpendicular to the posts at a maximum of 600 mm at the center distance and at most 150 mm from the ceiling / wall junction. Fasten them to each support using drywall screws 25 mm long.

.14 Place a 150 mm continuous strip cut in a 12.7 mm thick plasterboard at the base of each partition mounted on soft furs.

3.3 INSTALLATION

.1 Do not install gypsum board until standpipes, anchors, shims, acoustic insulation materials, electrical and mechanical installations have been approved.

.2 Fasten plasterboard to furring or metal framing with screw anchors. Install the screws at a maximum distance of 300 mm.

.1 Single layer coating

.1 Install plasterboard to ceiling first and then coat walls according to ASTM C 840.

.2 Lay the plates vertically or horizontally, in the direction that will give the least amount of joints.

.2 N/A

.3 N/A

.4 Outer Soffits and Ceilings: Install exterior plasterboards perpendicular to the support elements and offset the end joints along the supports. Leave a set of 6 mm at the end of the plates abutting other works.

.5 N/A

.6 Apply a 12 mm diameter continuous bead of acoustical sealant around the

perimeter of each partition wall at the meeting point of plasterboard and framing, where the bulkheads abutt the fixed elements of the building. Perfectly seal all cuts made around electrical boxes, ducts, etc., in partitions whose perimeter is lined with an acoustic sealant.

.7 N/A

.8 N/A

.9 N/A

.10 Install plasterboard on the ceiling in the direction that will provide the least amount of abutment joints. Offset end joints by at least 250 mm.

.11 Install plasterboard vertically on walls to eliminate butt joints. With the exception of areas where local codes or assemblies with fire resistance require vertical installation, the plates must be laid horizontally on stairs and other spaces with large wall surfaces. and the butt joints must be staggered on the posts.

.12 Lay the plates with the facing side facing out.

.13 Do not lay damaged or damp plasterboards.

.14 Place the butt joints on the support elements. Offset vertical joints on different posts on each side of the wall.

3.4 INSTALLATION

.1 Mount the accessories squarely, plumb or level, and secure them securely in the plane provided. Use full length pieces where possible. Make joints tight, aligned and securely fastened. Trim the mitered angles and adjust them perfectly, leaving no rough or irregular edges. Fix the elements at 150 mm oc.

.2 Lay the outcrop moldings around the perimeter of the suspended ceilings.

.3 Lay out flush moldings at the junction of drywall and non-jointed surfaces, as well as at the various locations indicated. Seal the joints with a sealant.

.4 Install continuous insulating strips at the edges of plasterboards and outcropping at their junction with the metal frames of windows and exterior doors so that there is no thermal bridge.

.5 Install a cavity molding at the wall / ceiling junction as indicated. Reduce the number of joints to a minimum; use corner moldings and finger pieces.

.6 Make shrinkage joints with prefabricated elements inserted into the plasterboard liner and attached independently to each side of the joint.

.7 Install a continuous polyethylene dust screen at the bottom and across the shrinkage joints.

.8 N/A

.9 Make the right-angle and aligning joints.

.10 Make expansion joints [in detail] at the location of the building expansion and construction joints. Cover them with a continuous dust screen.

.11 Make the expansion joints square and alignment.

.12 Install chaperones on plasterboard partitions that do not extend to the ceiling.

.13 Adjust the chaperone on the partition and fix it to the sandbox using two rows of sheet metal screws arranged in staggered rows, at a distance of 300 mm.

.14 Enter the coronations at the corners and intersections, and fix them to each element by means of three (3) screws.

.15 Install inspection hatches for electrical and mechanical equipment specified in the appropriate sections.
- .1 Secure frames to furs or structural members.

.16 Finish the joints between the plates and in the re-entrant angles using the following products: joint compound, tape and tape coating. Apply these products according to the manufacturer's recommendations and smooth by slimming everything to catch the surface finish of the plates.

.17 Gypsum board finish: Gypsum board wall and ceiling finishes meet the requirements outlined in AWCI's Levels of Gypsum Board Finish.
- .1 Degree of finish
  - .1 N/A
  - .2 N/A
  - .3 N/A
  - .4 N/A
  - .5 N/A
  - .6 Step 5: Sand the tape over the joints and inside corners in a joint compound and apply three separate layers of paste over the joints, angles and head of the fasteners and other accessories used. Then apply a thin layer of facing plaster on the entire surface of the coating put in place. Jointed surfaces should be smooth and free from tool marks and dents.

.18 Cover corner moldings, recess joints, and, if necessary, trim, with two coats of joint compound and a layer of tape coating, smoothed and thinned to catch the surface finish of the plates.

.19 Fill the depressions left by the screw heads with joint compound and tape until a solid surface is flush with the adjacent surfaces of the drywall, so that these depressions are invisible once finished.

.20 Lightly sand irregular ends and other imperfections. Avoid sanding adjacent surfaces.

.21 Once the installation is complete, the structure must be smooth, level or plumb, free from ripples and other defects, and ready to be finished with a finishing coat.

.22 Coat the surface to be textured with a coat of white filler primer. Allow to dry, then apply the textured finish according to the manufacturer's instructions.

.23 Mix the joint compound so as to obtain a slightly less consistent mixture than when finishing the joints.

.24 Apply a thin layer of plaster to the entire surface using a plasterer trowel or plaster knife to even out surface texture, unevenness and tool marks.

.25 Allow the siding to dry completely.

.26 Remove dents by sanding lightly or wiping with a damp cloth.

3.5 CLEANING

.1 Cleaning during work: carry out cleaning according to section 01 74 11 - Cleaning.
- .1 Leave the places clean at the end of each working day.
- .2 Final cleaning: remove surplus materials, rubbish, tools and equipment in accordance with section 01 74 11 - Cleaning.

.2 N/A

3.6 PROTECTION

.1 Protect installed equipment and components from damage during construction.

.2 Repair damage to adjacent materials and equipment by installing plasterboard liners.

3.7 LISTS AND TABLES

.1 N/A

END OF SECTION

1 GENERAL

1.1 SUMMARY

.1 Content of the section
- .1 Materials, products and methods associated with the on-site application of paint coatings on new interior substrates, including on-site painting of surfaces previously primed with primer or paint impression.

1.2 REFERENCES

.1 Department of Justice Canada (Jus)
- .1 Canadian Environmental Protection Act (CEPA), (1999), c. 33.
- .2 Environmental Protection Agency (EPA)
  - .1 EPA Test Method for Measuring Total Volatile Organic Content Compound of Consumer Products, Method 24 - 1995, (for Surface Coatings).

.3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
- .1 Data Sheets (FS).

.4 Master Painters Institute (MPI)
- .1 MPI Architectural Painting Specifications Manual, 2004.

.5 National Fire Code of Canada - 1995

.6 Society for Protective Coatings (SSPC)
- .1 SSPC Painting Manual, Volume Two, 8th Edition, Syst ems and Specifications Manual.

.7 Transport Canada (TC)
- .1 Transportation of Dangerous Goods Act, 1992, c. 34.

1.3 QUALITY ASSURANCE

.1 Qualifications
- .1 The Contractor must be able to demonstrate that he has at least five (5) years of experience in performing similar work. Provide a list of the last three (3) comparable projects with the name and location of the project, the quoting contract authority and the name of the project manager.
- .2 The paint work must be performed by skilled workers who hold a "man of competence Certificate of trade."
- .3 Apprentices can also be engaged on the condition that they work under the direct supervision of a skilled worker in accordance with the regulations governing this trade.

.2 Samples of the book
- .1 Provide two painted cartons of each color chosen.

.3 N/A

.4 Health and security
- .1 Take the necessary health and safety measures in accordance with section 01 35 29.06 - Health and safety.

1.4 SCHEDULE OF WORK

.1 Submit the schedule of various stages of painting work to the Departmental Representative for review at least 48 hours before the scheduled start of work.

.2 Obtain written authorization from the Departmental Representative for any changes to the work schedule.

.3 Establish the schedule of work so as not to disturb the occupants of the building.

1.5 SUBMITTALS / SUBMITTALS FOR APPROVAL / INFORMATION

.1 Submit the required documents and samples in accordance with Section 01 33 00 - Documents and samples to submit.

.2 Data sheets
- .1 Submit the data sheets and instructions required for each type of paint or coating used in the coating.
- .2 Submit the required data sheets for the application or use of paint thinner.
- .3 Submit two (2) Material Safety Data Sheets (MSDS) required under the Workplace Hazardous Materials Information System (WHMIS), which must comply with this system, as per Section 01 33 00 - Documents and samples to submit. The sheets must indicate the VOC emission rate of the products during application and cure.

.3 Samples
- .1 Make a sample on a 190mm x 130mm cardboard for each of the specified colors.
- .2 Provide two (2) 200mm x 300mm sample panels of each required paint of each color, texture and degree of gloss or gloss required in accordance with the requirements of the MPI Architectural Painting Specification Manual, using the following media materials:
  - .1 Use a 3 mm thick steel plate for products applied to a metal substrate.
  - .2 Use a 13mm thick birch plywood board for products applied to a wooden substrate.
  - .3 N/A
  - .4 N/A
  - .5 N/A
- .3 Keep the specimens of the structure examined on site to indicate the minimum standard of quality deemed acceptable for surface finishes made on site.
- .4 N/A
- .5 Certificates Submit documents signed by the manufacturer, certifying that products, coatings and other materials meet the requirements for physical characteristics and performance criteria.
- .6 Manufacturer's instructions
  - .1 Submit application and implementation instructions provided by the manufacturer.

.7 Documents / Deliverables upon Completion: Submit the following information for maintenance work for inclusion in the manual.
.1 The name, type and manner of use of the product.
.2 The product number of the manufacturer.
.3 The numbers of the colors.

.4 The mention of the product according to the MPI Environmental Choice program classification.

1.6 INTERVIEW

.1 Materials and substitutes
.1 Provide materials and substitutes from the same production lots as those implemented. Cover them with protective packaging, correctly marked with the appropriate labels.
.2 Quantity: provide one (1) container of four (4) liters of each color and type of product for priming or finishing coat. Mark the paint and plaster containers by associating each color and type of product used with the nomenclature of the paint coatings and plaster accepted, specifying in addition the colors selected for the different products.
.3 Transportation, Storage and Protection: Comply with the requirements of the Departmental Representative for the transportation and storage of materials and substitutes.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 Packing, shipping, handling and unloading
.1 Pack, ship, handle and unload materials and products in accordance with the manufacturer's instructions.

.2 Acceptance of materials and products
.1 Identify paint and plaster products, and materials and products used with labels indicating:
.1 the name and address of the manufacturer;
.2 the type of paint or coating;
.3 compliance with relevant standards or requirements;
.4 the color number, according to the list of colors specified.

.3 Remove damaged and unauthorized materials and products from the site.

.4 Storage and protection
.1 Provide a safe storage area, kept dry and kept at a controlled temperature, and maintain it properly.
.2 Store materials and products away from sources of heat.
.3 Store materials and products in a well-ventilated area with temperatures between 7 degrees Celsius and 30 degrees Celsius.

.5 The storage temperature of temperature-sensitive products must never be lower than the minimum temperature recommended by the manufacturer.

.6 Keep areas used for storage, cleaning and surface preparation clean and in good

order. Once the work is done, return these areas to their original state of cleanliness.

.7 Remove from the storage area only the quantities of products that will be implemented the same day.

.8 Fire safety requirements
- .1 Provide one (1) 9 kg ABC chemical powder fire extinguisher and place near the storage area.
- .2 Place oily rags, waste materials, empty containers and materials subject to spontaneous combustion in ULC-certified containers and remove these containers from the job site daily.
- .3 Handle, store, use and dispose of flammable and combustible products and materials in accordance with the requirements of the National Fire Code of Canada.

1.8 CONDITIONS OF IMPLEMENTATION

.1 Heating, ventilation and lighting
- .1 Ventilate the enclosed spaces.
- .2 Provide heating facilities to raise ambient air and substrate temperatures to more than 10 degrees Celsius hours before the start of the work, and to maintain these temperatures during and after the execution of the latter, until the surfaces have sufficiently dried and hardened.
- .3 Provide continuous ventilation for seven (7) days after completion of the work.
- .4 Coordinate the use of the existing ventilation system with the Professionals and, if necessary, make the necessary arrangements for its operation during and after the execution of the works.
- .5 Provide and temporarily install the necessary heaters and ventilators if the permanent systems can not be used; If the building's permanent systems do not meet the minimum requirements, provide and install the additional equipment required to meet the minimum requirements.
- .6 Provide the required lighting equipment and maintain a level of illumination of at least 323 lux on the surfaces to be painted.

.2 Ambient temperature, relative humidity and moisture content of the substrate
- .1 Unless previously obtaining written authorization from the manufacturer of the coating material used, do not proceed with the painting work under the conditions listed below:
  - .1 Ambient air and substrate temperatures are below 10 degrees Celsius.
  - .2 The substrate temperature is greater than 32 degrees Celsius, unless the formulation of the paint to be used is designed for application at high temperatures.
  - .3 Ambient air and substrate temperatures are not within the range recommended by the MPI or the paint manufacturer.
  - .4 The relative humidity is below 85 % or dew point is a difference of more than 3 degrees Celsius between the

temperature of the air and that of the substrate. The paint product should not be applied if the difference between the dew point and the ambient or substrate temperature is greater than 3 degrees Celsius. The relative humidity should be determined using a sling psychrometer before the start of implementation.

.5 It rains, it snows, there is fog or drizzle, or precipitation in the form of snow or rain is expected before the complete drying of the paint.

.6 The ambient conditions during drying or crosslinking of the product or coating applied comply with the specified ranges until the new coating used can withstand common climatic conditions.

.2 Execute the paint coating to ensure compliance with the conditions and the maximum moisture content of the substrate listed below:

.1 cure period of at least 28 days for new concrete or masonry surfaces;

.2 maximum moisture content of 15 % for wood;

.3 maximum moisture content of 12 % for plasterboard and plaster.

.3 Conduct tests to determine the moisture content of the substrates using a properly calibrated electronic moisture meter. If it is concrete floors, evaluate the moisture content with a simple " control of the hiding power on reference surface ".

.4 Conduct tests on plaster, concrete and masonry surfaces to determine their alkalinity.

.3 State of surfaces and conditions of implementation

.1 Apply the paint product only in areas where the quality of the finished surfaces will not be affected by dust suspended in the ambient air during construction or by windblown dust or the ventilation system..

.2 Apply paints and coatings to properly prepared surfaces with a moisture content within the specified range.

.3 Apply the paint when the previous coat is dry or sufficiently hardened.

.4 Additional requirements for the application of paint or plaster to interior surfaces

.1 Apply paint products when the temperature at the work site can be maintained within the limits recommended by the manufacturer of the products used.

.2 In occupied buildings, all painting work must be done after closing hours. The schedule of work must be approved by the Ministerial Representative and must provide sufficient drying and crosslinking time before the return of the occupants.

2 PRODUCTS

2.1 MATERIALS / MATERIALS

.1 Paint products and coatings listed in the MPI Approved Product List may be used in this work.

.2 All products forming the chosen paint system must come from the same manufacturer.

.3 See section 2.5

2.2 COLORS

.1 Submit the list of proposed colors to the Departmental Representative for review.

.2 The color list will be based on the selection of three (3) basic colors and one (1) accent color. A maximum of four (4) colors will be chosen for all the works and at most three (3) colors will be used in the same area.

.3 The colors will be chosen from the full range of colors and colors offered by the manufacturers.

.4 If particular products are offered in a limited range of colors, the colors of the products actually implemented will be selected in that restricted range.

.5 In three (3) coat paint systems, the second coat should be a slightly lighter shade than the topcoat to facilitate visual identification of each coat.

2.3 MIXING AND COLORING

.1 Color the coating products before transporting them to the site. This coloring must first be authorized in writing by the Ministerial Representative.

.2 Mix the paste, powder or catalytic cure paints in accordance with the manufacturer's written instructions.

.3 Some amount of thinner may be added to the paint, as required, according to the manufacturer's recommendations. Kerosene or any similar organic solvent should not be used to dilute paints with water.

.4 Dilute the spray paint according to the manufacturer's instructions.

.5 Before and during its application, carefully shake the paint in its container to defeat the agglutinated materials, to ensure the complete dispersion of the deposited pigments, and to preserve the uniformity of the color and gloss of the applied paint.

2.4 DEGREE OF BRILLIANT (LUSTER)

.1 N/A

.2 The gloss levels of the surfaces coated with paint shall be in accordance with the indications and the nomenclature of surface finishes.

2.5 PAINT SYSTEMS INTERIOR

.1 System for plasterboard, gypsum board and poured concrete ceilings:
Apply 1 primer-sealer layer zero VOC latex such as Sico 850-130 Ecosource approved Green Seal GS-11.
Apply 2 coats of matte to zero VOC latex ceiling as Ecosource Sico 851-112 (white) and approved Green Seal GS-11 and MPI-143.

.2 System for plasterboard walls, gypsum panels, poured concrete and concrete blocks :
Apply 1 primer-sealer layer zero VOC latex such as Sico 850-130 Ecosource approved Green Seal GS-11. Apply 2 coats of 100% VOC Zero Velvety Latex Latex such as Sico EcoSource 853 Series and Green Seal GS-11 and MPI-144 approved.

OR

Apply 2 coats of 100% acrylic latex zero VOC melamine finish such as ecosource series 855 approved Green Seal GS-11.

.3 System for wood surfaces to be painted (doors or woodwork)

Seal the nodes or veins of sap with a shellac layer such as 205-112.
Apply 1 coat of low VOC latex primer such as 870-177 from Sico Expert and Green Seal GS-11 approved.
Apply 2 coats of 100% acrylic latex zero VOC finished melamine such as ecosource series 855.

.4 System for concrete block walls

Apply 1 coat of concrete block prime primer such as Sico Expert 675-115 approved CGSB 1.188 and MPI-4.
Apply 2 coats of epoxy enamel gloss enamel such as Sico Expert 603 series approved CGSB 1.59 or select one of the finishes presented in #2.

OR
Apply 2 coats of 100% acrylic latex reinforced with urethane such as Sico series 261 type ONGC 1.154.

.5 System for wood surfaces to be painted (doors or woodwork) :

Seal the nodes or veins of sap with a shellac layer such as Sico 205-112.
Apply 1 coat of alkyd primer such as Sico Expert 880-114 approved CGSB 1.38 and MPI-46, and 2 topcoats as selected according to Table # 2.
OR

Apply 2 coats of 100% acrylic latex reinforced with urethane such as Sico series 261 CGSB 1.154.

.6 System for woodwork to be dyed with alkyd :

Apply 1 coat of pigmented stain (or more as needed) to alkyd such as Sico 206 Series MPI-90 approved.
Apply 3 coats of urethane varnish such as Sico Expert 901-101 (gloss) approved MPI-56 or 901-106 (semi-gloss) approved MPI-57.

.7 System for woodwork to be dyed with latex, other than floors :

Apply 1 coat of pigmented latex dye (or more as needed) such as Sico 118 series.
Apply 3 coats of clear latex lacquer such as Sico 194-090 (glossy) approved MPI-130 or 194-100 (semi-gloss) approved MPI-128.

.8 System for concrete floors:

See architectural plans

.9 System for ferrous metal surfaces, primed or not
(FOR ALL EXISTING STEEL PARTITIONS TO BE REPAIRED)
1 apply high performance primer epoxy polyamide components 2 such as **Sikagard COR-PRO-470** or equivalent approved.

Apply 2 coats of pearl finish alkyd enamel such as Sico Expert 886 series approved CGSB 1.202, Type II or approved equivalent.

.10 System for galvanized or galvanized metal surfaces :

Treat the surface with metal cleaner and rust remover such as Sico 635-104. Rinse with clear water (under pressure).
Apply 1 coat of galvanized metal latex primer such as Sico 635-045.
Apply 2 topcoats according to System Chart # 2.

.11 System for large ceilings in " steel deck "and steel deck :

Apply, as per manufacturer 's specifications, dry fall spray paint such as Sico Expert 881 Series (Matte Finish) or 882 (Eggshell Finish) or Latex such as Sico Expert 871-140 approved MPI - 118.

2.6 SPECIAL COATING PRODUCTS

.1 N/A

2.7 QUALITY CONTROL AT SOURCE

.1 Submit to the tests below each batch of post-consumer recycled content prior to preparing the new product formulation for the surface coating and placing the product in a container. The tests must be performed by a laboratory or facility that has been accredited by the Standards Council of Canada.

.1 The lead, cadmium and chromium contents should be determined according to method number 6010 called High Frequency Induced Plasma Emission Spectroscopy (SE / PIHF), as defined in EPA SW-846.
.2 The mercury content should be determined by method number 7471 called atomic absorption spectrometry - cold vapors, as defined in EPA SW-846.
.3 Levels of organochlorine compounds and biphenyls Polychlorinated (PCB) (diphenyl) products shall be determined by method number 8081 called Gas Chromatography (GPC), as defined in EPA SW-846.

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with manufacturer's recommendations or written instructions, including product bulletins and data sheets, as well as instructions for handling, storage and product implementation.

3.2 GENERAL

.1 Unless otherwise specified, prepare interior surfaces and paint according to MPI Architectural Painting Specifications. Manual.

.2 Apply paint products according to the manufacturer's written instructions.

3.3 INSPECTION

.1 Inspect existing substrates to verify that their condition may compromise the proper preparation of the surfaces to be painted or coated. Before starting the work, report to the Departmental Representative, if any, the damages, defects or unsatisfactory or unfavorable conditions detected.

.2 Conduct tests to verify the moisture content of surfaces to be painted using a properly calibrated electronic moisture meter; the moisture content of concrete floors, however, must be evaluated by a simple "control of the covering capacity on the reference surface". Do not start work until surface conditions are acceptable, within the manufacturer's recommended range.

.3 Maximum permissible moisture content
.1 Stucco, plaster and drywall: 12%.
.2 Concrete: 12%.
.3 Blocks and bricks of concrete or fired clay: 12%.
.4 Wood: 15%.

3.4 PREPARATORY WORK

.1 Protection

.1 Protect building surfaces and adjacent structures that are not to be painted or coated against speckles, markings, and other damage with disposable covers or caches. If the surfaces in question are damaged, clean and repair them as directed by the Ministerial Representative.

.2 Protect permanently attached items, such as fire-resistance certification labels on doors and racks.

.3 Protect factory-finished equipment and components from a finishing product.

.4 Ensure the protection of occupants of the building located in or near the building.

.2 Surface preparation

.1 Remove cover plates from electrical appliances, lighting fixtures, overlay hardware on doors, bathroom fixtures and other hardware, and surface mount fittings and fittings before starting work. coating work. Identify all items deposited and store them in a safe place; rest them once the paint coating is complete.

.2 If necessary, cover or move furniture and transportable items to facilitate painting. Deliver these items and materials as work progresses.

.3 Post signs "FRESH PAINTING" in the areas occupied during the execution of the work. Signs must be accepted by the Ministerial Representative.

.3 Clean and prepare interior surfaces in accordance with the requirements of the MPI Architectural Painting Specification Manual. Refer to this document for specific requirements that will be added to the instructions below.

.1 Remove dust, dirt and other foreign matter by wiping surfaces with clean, dry cloths and vacuuming or sweeping with a jet of compressed air.

.2 Wash surfaces with a biodegradable detergent and clean hot water, using a stiff bristle brush to rid the surfaces of dirt, oil and other contaminants.

.3 After having thoroughly brushed the surfaces, rinse them with clean water until no foreign matter remains.

.4 Allow the surfaces to drain completely and dry thoroughly.

.5 To prepare surfaces for water-based paint, it is recommended to use water-based cleaning agents rather than organic solvents.

.6 Fill spray hoses with trigger sprayers.

.7 Once dry, many water-based paints can not be removed with water. The use of mineral spirits or organic solvents for the cleaning of these paints should be minimized.

.4 Before applying the primer or printing and between subsequent coats, prevent the cleaned surfaces from being contaminated by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents. Apply primer or primer, paint, or other pretreatment product as soon as possible after cleaning, before the surface is re-contaminated.

.5 Whenever possible, apply a coat of printing to the concealed surfaces of the new wooden structures before putting them in place. Use for this purpose the printing products prescribed for exposed surfaces.
- .1 Apply a vinyl printing product that meets the requirements for MPI product number 36 on knots, gums, sap and resinous surfaces.
- .2 Seal cracks and nail holes with a filler.
- .3 Dye the filler before application on stained wood products.

.6 Sand and dust surfaces between layers as needed to ensure proper adhesion of the next layer and to eliminate any visible defects at a distance of 1000 mm or less.

.7 Clean metal surfaces (surfaces) to be painted by removing rust, rolling flakes, welding slag, dirt, oil, grease and other foreign matter in accordance with the requirements of the MPI. Remove all traces of stripping material, then clean the corners and recesses of the surfaces with clean brushes.

.8 Touch up coated surfaces with a shop-printed product using the appropriate printing medium as indicated.

.9 Do not apply paint to prepared surfaces until accepted by the Departmental Representative.

3.5 APPLICATION

.1 The method of application used must be accepted by the Ministerial Representative. Apply the paint roller. Unless otherwise specified, apply the product according to the manufacturer's instructions.

.2 Brush, brush and roller application
- .1 Apply an even coat of paint with a brush, brush and / or roller of the appropriate type.
- .2 Bring the paint into cracks, crevices and corners of the elements.
- .3 Apply the paint with a gun, pad or sheepskin on surfaces and in inaccessible corners with a brush or brush. Use a brush or brush, pad or sheepskin when it is impossible to paint certain surfaces or corners with a roller.
- .4 Remove scallops and drips with a brush, brush or roller and iron over left marks. Roller-painted surfaces must be free of roller marks and excess paint.
- .5 Remove festoons, drips and brush or brush marks on finished surfaces, and take up these surfaces.

.3 Spray application
- .1 Provide equipment designed for the desired result, capable of spraying the product to be applied and provided with pressure regulators and manometers appropriate. Keep this equipment in good condition.
- .2 During paint application, ensure adequate mixing of the ingredients in the container by continuous mechanical agitation or repeated intermittent agitation as often as necessary.

.3 Apply a coat of even paint, overlapping the surface covered during the previous pass. Iron with a dry roll after applying the first coat.
.4 Immediately remove drips and scallops with a brush.
.5 Use brushes or brushes to get the paint into cracks, crevices, and other hard-to-reach spots with the gun spray.

.4 Use a pad or sheepskin, or soak only if there are no other ways to paint hard-to-reach surfaces.

.5 Apply each coat of paint to obtain a continuous film of uniform thickness. Resume stripped surfaces or covered with a film too thin before applying the next layer.

.6 Allow the surfaces to dry and harden properly after cleaning and between each successive coat, waiting for the minimum recommended by the manufacturer.

.7 Sand and dust off the surfaces between each layer to eliminate visible defects.

.8 Finish the surfaces above and below the sightlines in accordance with the requirements for adjacent surfaces, including areas s

.9 Finish the interior of cabinets and closets according to the indications provided for exposed surfaces.

.10 Finish alcoves and storage as indicated for adjacent rooms.

.11 Finish the top, bottom, edges and door openings in accordance with the requirements applicable to the facing surfaces of doors after they have been adjusted.

3.6 ELECTRICAL AND MECHANICAL EQUIPMENT

.1 N/A

.2 N/A

.3 Other unfinished areas: leave piping, electrical conduits, ventilation ducts, brackets / suspensions, and other apparent electrical and mechanical components in their original condition, and touch only scratches and other marks on covers existing.

.4 Touch up scratches and marks on factory applied coatings using the product supplied by the equipment manufacturer.

.5 Do not paint the nameplates.

.6 Do not paint the heads of sprinklers.

.7 Apply a printing product and a coat of matte black paint to the interior surfaces of the ventilation ducts that can be seen through the grilles, registers and diffusers.

.8 N/A

.9 N/A

.10 N/A

.11 Paint both sides and sides of electrical and telephone equipment wiring boards prior to installation. Leave the equipment in its original condition, with the exception of any necessary retouching, and paint the ducts, mounting hardware, and other unfinished components.

.12 Do not paint transformers and indoor equipment at power distribution substations.

3.7 TOLERANCES FOR IMPLEMENTATION

.1 Walls: no visible defects at a distance of 1000 mm, at an angle of 90 degrees to the surface examined.

.2 Ceiling: no visible defect by an observer on the ground, at an angle of 45 degrees to the surface under examination, under the final lighting provided.

.3 The color and gloss of the topcoat should be uniform over the entire surface being examined.

3.8 QUALITY CONTROL ON SITE

.1 Interior decoration and paint or plaster work must be inspected by a paint inspection agency (an inspector) recognized by the contract authority and the local paint contractors association. The inspection agency must be notified by the paint contractor at least one week before the start of the work and the latter must provide him with the estimate of the paint or coating work, the specifications, the plans., elevation drawings (including relevant detail drawings) and the nomenclature of finishing products.

.2 Interior surfaces to be coated with paint or plaster must be inspected prior to the start of painting work or after the application of a primer that has revealed defects in the substrate by the inspection agency. Painting work that will inform the Departmental Representative and the General Contractor in writing of the various defects and problems identified.

.3 When applying "special" paints, coatings or decoration systems (eg elastomer-based products) or products or systems not included in the MPI product list, the manufacturer of the paint or coating used shall, as part of its duties, approve existing surfaces and conditions for the application of the specified paint or coating system as well as the supervision On-site inspection and approval of paint and coating installation work, as required, at no additional cost to the Departmental Representative.

.4 Quality standard
.1 Walls: no visible defects at a distance of 1000mm, at a 90 degree angle to the surface being examined.

.2 Ceilings: no visible defect by an observer [on the ground], at a 45 degree angle to the surface under examination, under the intended final illumination.

.3 The color and gloss of the topcoat should be uniform over the entire surface being examined.

.5 On-site inspection of interior painting work will be carried out by an independent inspection agency appointed by the Ministerial Representative.

.6 Inform the Departmental Representative when a surface and product applied on site is ready for inspection. Do not apply the next layer until the previous layer has been approved.

.7 Cooperate with the paint inspection agency and provide access to all areas of the site.

.8 Maintain purchase slips, invoices, and other documents to establish, at the request of the Departmental Representative, the conformity of the work with the specified MPI requirements.

3.9 REHABILITATION OF THE PLACES

.1 Clean and reinstall all removed hardware to facilitate painting.

.2 Remove guards and warning signs as soon as possible after completion of work.

.3 Remove splashes on exposed surfaces that have not been painted. Remove burrs and speckles as work progresses with a compatible solvent.

.4 Protect freshly painted surfaces from drips and dust, to the satisfaction of the Departmental Representative, and avoid scratching new coatings.

.5 Return the premises used for the storage, mixing and handling of paints and the cleaning of the tools and equipment used in their initial state of cleanliness, to the satisfaction of the Departmental Representative.

END OF SECTION

1 GENERAL

1.1 RELATED REQUIREMENTS

.1 N/A
.2 N/A

2 PRODUCTS

2.1 MATERIALS

.1 Grid scratch:
- .1 Standard:
  - .1 All grid sections shall be ASTM B117 compliant and capable of 1000 hours salt spray without significant changes.
  - .2 The manufacturer must be able to confirm these data and provide the Departmental Representative with the necessary documents at the same time as the shop drawings.
- .2 N/A
- .3 Provide and install according to the dimensions indicated on the plans.
- .4 Provide and install a waterproof receptacle basin that is suitable for the type of floor in question and the type of floor finish surrounding the grate.
- .5 Basin:
  - .1 galvanized steel cal. 20, with tin soldered joints;
  - .2 all joints will be welded to make the pool completely watertight;
  - **.3 no caulking, even silicone, will be used;**
  - .4 the basin is screwed to the frame at 22 mm under the grate
  - .5 Coat surfaces in contact with concrete with two coats of bituminous paint.
  - .6 Drain:
    - .1 The tank is watertight and without drainage.
  - .7 Grid:
    - .1 model framework TT From the Bolar company, with noise cushion; or equivalent approved
    - .2 blades: shaped " T »Dimensions 3/8 " x 1/8 " x 1 " (9.5mm x 3mm x 25mm) striated at every 7/8 " (22mm). The notches will be 9/64 " (3.2mm) wide by 3/16 " (4.7mm) deep. The spacing between the blades should not exceed 3/16 " (4.7mm).
      Model: BSA 4 from Bolar or approved equivalent. Overall depth of 2 " (50mm) from the finished floor;
    - .3 the spacing of the retaining blades and rods will be in accordance with the required bearing capacity. The grids will be provided in easy-to-handle size section for ease of maintenance.
    - .4 Sections will have a coefficient of friction of 1.10 and a cleaning efficiency of 59%. The opening percentage will be 40%.

.5 Deformation under lateral load shall not exceed 9 (visual) after applying a maximum load of 6130 Newton (1380 pounds) at a 45 degree angle in relation to the surface.
.6 include all necessary intermediate supports.

3 EXECUTION

3.1 EXECUTION

.1 Install all components described in this Section as recommended by the manufacturer.

.2 Grids will only be put in place at the end of the work, in order to protect them against any damage.

.3 Provide maintenance books and manufacturer's warranties at the end of the work.

.4 Install square and level scraper grids with the finished floor to allow easy handling of all sections. All frame and intermediate support sections should be level and firmly supported over their entire length to avoid long-term deflection. Smooth the concrete screed around the grid once it is well in place, using a grout without shrinkage.

END OF SECTION