



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux
Canada

Place Bonaventure,
800 rue de la Gauchetière Ouest
Voir aux présentes - See herein

Montréal

Québec

H5A 1L6

FAX pour soumissions: (514) 496-3822

INVITATION TO TENDER

APPEL D'OFFRES

**Tender To: Public Works and Government Services
Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Soumission aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure,
800 rue de la Gauchetière Ouest
Voir aux présentes - See herein
Montréal
Québec
H5A 1L6

Title - Sujet Rénovation maison Girard	
Solicitation No. - N° de l'invitation EE520-181044/A	Date 2017-09-15
Client Reference No. - N° de référence du client R.079387.001	GETS Ref. No. - N° de réf. de SEAG PW-\$MTC-120-14529
File No. - N° de dossier MTC-7-40161 (120)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-10-03	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Harvey, Keven	Buyer Id - Id de l'acheteur mtc120
Telephone No. - N° de téléphone (514) 496-3798 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DES TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA ESC 2 - PARCS CST 2 - PARKS 3, PASSAGE DU CHIEN D'OR QUEBEC Québec G1R3Z8 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée .	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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INVITATION TO TENDER
UPGRADING (RENOVATION) OF LA MAISON GIRARD
NATIONAL WILDLIFE RESERVE (NWA)
OF THE BAY OF ISLE-VERTE

IMPORTANT NOTICE TO BIDDERS

CHANGE OF ADDRESS – BIDS DELIVERY

In person or by mail
Place Bonaventure, South-East Portal, 7th Floor
800 de la Gauchetière Street West, Suite 7300
Montreal (QC), H5A 1L6
By facsimile: (514) 496-3822

PROMPT PAYMENT IN THE CONSTRUCTION INDUSTRY

Prompt Payment Principles

Public Services and Procurement Canada advocates that construction-related payments should follow these three principles:

- Promptness: The department will review and process invoices promptly. If disputes arise, Public Services and Procurement Canada will pay for items not in dispute, while working to resolve the disputed amount quickly and fairly
- Transparency: The department will make construction payment information such as payment dates, company names, contract and project numbers, publicly available; likewise, contractors are expected to share this information with their lower tiers
- Shared responsibility: Payers and payees are responsible for fulfilling their contract terms including their obligations to make and receive payment, and to adhere to industry best practices

For more information: <http://www.tpsgc-pwgsc.gc.ca/biens-property/divulgate-disclosure/psdic-ppci-eng.html>

SUPPORT THE USE OF APPRENTICES

The Government of Canada proposes to support the employment of apprentices in federal construction and maintenance projects. To support this initiative, a voluntary certification signaling the Bidder's commitment to hire and train apprentices is available on Appendix 4.

PWGSC UPDATE ON ASBESTOS USE

Effective April 1, 2016, all Public Works and Government Services Canada (PWGSC) contracts for new construction and major rehabilitation will prohibit the use of asbestos-containing materials. Further information can be found at <http://www.tpsgc-pwgsc.gc.ca/comm/vedette-features/2016-04-19-00-eng.html>

ADDITION OF TERMINOLOGY

Take note of the additional paragraph is included in clause R2810D identified in SC04.

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R2710T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI) (2017-04-27)

The following GI's are included by reference and are available at the following Web Site

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

- GI01 Integrity Provisions - Bid
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SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 BID DOCUMENTS

1. The following are the Bid Documents:

- a. Invitation to Tender - Page 1;
- b. Special Instructions to Bidders;
- c. General Instructions - Construction Services - Bid Security Requirements R2710T (2017-04-27)
- d. Clauses & Conditions identified in "Contract Documents";
- e. Drawings and Specifications;
- f. Bid and Acceptance Form and related Appendix(s); and
- g. Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2. General Instructions - Construction Services - Bid Security Requirements R2710T is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Authority named on the Invitation to Tender - Page 1 at e-mail address keven.harvey@tpsgc-pwgsc.gc.ca as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI15 of R2710T, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may result in an answer NOT being provided.
2. To ensure consistency and quality of the information provided to Bidders, the Contracting Authority will examine the content of the enquiry and shall decide whether or not to issue an amendment.
3. All enquiries and other communications related to this bid sent throughout the solicitation period must be directed ONLY to the Contracting Authority named in paragraph 1. above. Failure to comply with this requirement may result in the bid being declared non-compliant.

SI03 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with GI10 of R2710T. The facsimile number for receipt of revisions is (514) 496-3822.

SI04 BID RESULTS

1. A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" (top left corner) for the receipt of bids shortly after the time set for solicitation closing.
2. The responsive bid carrying the lowest price will be recommended for contract award.
3. Following solicitation closing, bid results may be obtained by calling (514) 496-3388.

SI05 INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

- a. cancel the solicitation; or
- b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid.

SI06 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders will have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. above is accepted, in writing, by all those who submitted bids, then Canada will continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1. above is not accepted in writing by all those who submitted bids then Canada will, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI11 of R2710T.

SI07 CONSTRUCTION DOCUMENTS

The successful Contractor will be provided **one electronic copy and one paper copy** of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. **The quote will be in letter format and the drawings in A1 format.** Obtaining more copies will be the responsibility of the Contractor including costs.

SI08 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appl>

Buy and Sell
<https://www.achatsetventes-buyandsell.gc.ca>

Canadian economic sanctions
<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Bid Bond (form PWGSC-TPSGC 504)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf>

Labour and Material Payment Bond (form PWGWSC-TPSGC 506)

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<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

PWGSC, Industrial Security Services

<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Construction and Consultant Services Contract Administration Forms Real Property Contracting

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Declaration Form

<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>

Trade agreements

<https://buyandsell.gc.ca/policy-and-guidelines/Policy-and-Legal-Framework/Trade-Agreements>

SI09 FINANCIAL BID

The total amount of the bid excludes taxes

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CONTRACT DOCUMENTS (CD)

1. The following are the Contract Documents:

- a. Contract Page when signed by Canada;
- b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
- c. Drawings and Specifications;
- d. General Conditions and clauses

GC1	General Provisions – Construction Services	R2810D	(2017-08-17);
GC2	Administration of the Contract	R2820D	(2016-01-28);
GC3	Execution and Control of the Work	R2830D	(2015-02-25);
GC4	Protective Measures	R2840D	(2008-05-12);
GC5	Terms of Payment	R2850D	(2016-01-28);
GC6	Delays and Changes in the Work	R2860D	(2016-01-28);
GC7	Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8	Dispute Resolution	R2880D	(2016-01-28);
GC9	Contract Security	R2890D	(2014-06-26);
GC10	Insurance	R2900D	(2008-05-12);
- e. Allowable Costs for Contract Changes Under GC6.4.1 R2950D (2015-02-25);
- f. Supplementary Conditions
- g. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
- h. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
- i. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.

2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

SUPPLEMENTARY CONDITIONS (SC)

SC01 INDUSTRIAL SECURITY RELATED REQUIREMENTS, DOCUMENT SAFEGUARDING

There is no document security requirement applicable to this Contract.

SC02 LIMITATION OF LIABILITY

GC1.6 of R2810D is deleted and replaced with the following:

GC1.6 Indemnification by the Contractor

1. The Contractor shall indemnify and save Canada harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by Canada or in respect of claims by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by, or attributable to the activities of the Contractor in performing the Work, provided such claims are caused by the negligent or deliberate acts or omissions of the Contractor, or those for whom it is responsible at law.
2. The Contractor's obligation to indemnify Canada for losses related to first party liability shall be limited to:
 - a. In respect to each loss for which insurance is to be provided pursuant to the insurance requirements of the Contract, the Commercial General Liability insurance limit for one occurrence as referred to in the insurance requirements of the Contract .
 - b. In respect to losses for which insurance is not required to be provided in accordance with the insurance requirements of the Contract, the greater of the Contract Amount or \$5,000,000, but in no event shall the sum be greater than \$20,000,000.

The limitation of this obligation shall be exclusive of interest and all legal costs and shall not apply to any infringement of intellectual property rights or any breach of warranty obligations.

3. The Contractor's obligation to indemnify Canada for losses related to third party liability shall have no limitation and shall include the complete costs of defending any legal action by a third party. If requested by Canada, the Contractor shall defend Canada against any third party claims.
4. The Contractor shall pay all royalties and patent fees required for the performance of the Contract and, at the Contractor's expense, shall defend all claims, actions or proceedings against Canada charging or claiming that the Work or any part thereof provided or furnished by the Contractor to Canada infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.
5. Notice in writing of a claim shall be given within a reasonable time after the facts, upon which such claim is based, became known.

SC03 INSURANCE TERMS

1) Insurance Contracts

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.
- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.
- (b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

3) Proof of Insurance

- (a) Before commencement of the Work, and no later than thirty (30) days after contract award, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

SC04 INTERPRETATION

R2810D General Condition GC1.1.2 Terminology is modified to include the following,

"Architectural and Engineering Services":

Mean's services to provide a range of investigation and recommendation reports, planning, design, preparation, or supervision of the construction, repair, renovation or restoration of a work and includes contract administration services, for real property projects.

"Construction Services":

Means construction, repair, renovation or restoration of any work except a vessel and includes; the supply and erection of a prefabricated structure; dredging; demolition; environmental services related to a real property; or, the hire of equipment to be used in or incidentally to the execution of any construction services referred to above.

"Facility Maintenance Services":

Means services related to activities normally associated with the maintenance of a facility and keeping spaces, structures and infrastructure in proper operating condition in a routine, scheduled, or anticipated fashion to prevent failure and/or degradation including inspection, testing, servicing, classification as to serviceability, repairs, rebuilding and reclamation, as well as cleaning, waste removal, snow removal, lawn care, replacement of flooring, lighting or plumbing fixtures, painting and other minor works.

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BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

UPGRADING (RENOVATION) OF LA MAISON GIRARD, NATIONAL WILDLIFE RESERVE (NWA) OF THE BAY OF ISLE-VERTE - 371, Road 132 L'Isle-Verte

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____ Fax: _____ PBN: _____

E-mail address: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT INDICATED IN APPENDIX 1**.

BA04 BID VALIDITY PERIOD

The bid must not be withdrawn for a period of sixty (60) days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Bidder's offer by Canada, a binding Contract will be formed between Canada and the Bidder. The documents forming the Contract will be the Contract Documents identified in "Contract Documents (CD)" section.

BA06 CONSTRUCTION TIME

The Contractor must perform and complete the Work within 12 weeks from the date of notification of acceptance of the offer.

BA07 BID SECURITY

The Bidder must enclose bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date

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APPENDIX 1 - COMBINED PRICE FORM

- 1) The prices per unit will govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
- 2) Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

LUMP SUM

The Lump Sum Amount designates Work to which a Lump Sum Arrangement applies.

- (a) Work included in the Lump Sum Amount represents all work not included in the unit price table.

UNIT PRICE TABLE

The Unit Price Table designates Work to which a Unit Price Arrangement applies.

- (a) Work included in each item is as described in the referenced specification section.
- (b) The Price per Unit shall not include any amounts for Work that is not included in that unit price Item.

	<i>Qty.</i>	<i>Unit.</i>	<i>\$/unit.</i>	<i>TOTAL</i>
SITE ORGANISATION	1	Lot	-	____\$
EXTERNAL MENUISERY	1	Lot	-	____\$
DOORS AND WINDOWS	1	Lot	-	____\$
ROOFING AND GUTTERS	1	Lot	-	____\$
INNER WORK	1	Lot	-	____\$
PAINT WORK	1	Lot	-	____\$
TOTAL Excluding applicable tax(es)	____\$			

APPENDIX 3 - LISTING OF SUBCONTRACTORS

- 1) In accordance with GI07 - Listing of Subcontractors and Suppliers of R2710T- General Instructions - Construction Services - Bid Security Requirements, the Bidder should provide a list of Subcontractors with his Bid.
- 2) The Bidder should submit the list of Subcontractors and for any portion of the Work valued at 20% or greater of the submitted Bid Price.

	Subcontractor	Division	Estimated value of work
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

APPENDIX 4 - VOLUNTARY CERTIFICATION TO SUPPORT THE USE OF APPRENTICES

(page 1 of 2)

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA APPRENTICE PROCUREMENT INITIATIVE

1. To encourage employers to participate in apprenticeship training, Bidders, bidding on construction and maintenance contracts by Public Works and Government Services Canada (PWGSC) are being asked to sign a voluntary certification, signaling their commitment to hire and train apprentices.
2. Canada is facing skills shortages across various sectors and regions, especially in the skilled trades. Equipping Canadians with skills and training is a shared responsibility. The Government of Canada made a commitment to support the use of apprentices in federal construction and maintenance contracts. Contractors have an important role in supporting apprentices through hiring and training and are encouraged to certify that they are providing opportunities to apprentices as part of doing business with the Government of Canada.
3. The Government of Canada is encouraging apprenticeships and careers in the skilled trades. In addition, the government offers a tax credit to employers to encourage them to hire apprentices. Information on this tax measure administered by the Canada Revenue Agency can be found at: www.cra-arc.gc.ca. Employers are also encouraged to find out what additional information and supports are available from their respective provincial or territorial jurisdiction.
4. Signed certifications on page 2 of 2 will be used to better understand contractor use of apprentices on Government of Canada maintenance and construction contracts and may inform future policy and program development.
5. The Contractor hereby certifies the following:

In order to help meet demand for skilled trades people, the Contractor agrees to use, and require its subcontractors to use, reasonable commercial efforts to hire and train registered apprentices, to strive to fully utilize allowable apprenticeship ratios * and to respect any hiring requirements prescribed by provincial or territorial statutes

The Contractor hereby consents to this information being collected and held by PWGSC, and Employment and Social Development Canada to support work to gather data on the hiring and training of apprentices in federal construction and maintenance contracts.

To support this initiative, a voluntary certification signaling the Contractor's commitment to hire and train apprentices is available at page 2 of 2.

If you accept fill out and sign page 2 of 2.

** The journeyperson-apprentice ratio is defined as the number of qualified/certified journeypersons that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice as determined by provincial/territorial (P/T) legislation, regulation, policy directive or by law issued by the responsible authority or agency.*

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Voluntary Certification

(To be filled out and returned with bid on a voluntary basis) (page 2 of 2)

Note: The contractor will be asked to fill out a report every six months or at project completion as per sample "Voluntary Reports for Apprentices Employed during the Contract" provided at Annex C

Name: _____

Signature: _____

Company Name: _____

Company Legal Name: _____

Solicitation Number: _____

Number of company employees: _____

Number of apprentices planned to be working on this contract: _____

Trades of those apprentices:

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CCC No./N° CCC - FMS No./N° VME

ANNEX A - CERTIFICATE OF INSURANCE (Not required at solicitation closing)

CERTIFICATE OF INSURANCE

Page 1 of 2



Description and Location of Work UPGRADING (RENOVATION) OF LA MAISON GIRARD, NATIONAL WILDLIFE RESERVE (NWA) OF THE BAY OF ISLE-VERTE - 371, Road 132 L'Isle-Verte	Contract No. EE520-181044
	Project No. R.079387.001

Name of Insurer, Broker or Agent	Address (No., Street)	City	Province	Postal Code
Name of Insured (Contractor)	Address (No., Street)	City	Province	Postal Code
Additional Insured <i>Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services</i>				

Type of Insurance	Insurer Name and Policy Number	Inception Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
Commercial General Liability Umbrella/Excess Liability				Per Occurrence	Annual General Aggregate	Completed Operations Aggregate
				\$	\$	\$
Builder's Risk Installation Floater				\$		

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)

Telephone number

Signature

Date D / M / Y

Solicitation No. - N° de l'invitation
EE520-181044

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur
MTC120

Client Ref. No. - N° de réf. du client
R.079387.001

File No. - N° du dossier
MTC-7-40161

CCC No./N° CCC - FMS No./N° VME

CERTIFICATE OF INSURANCE Page 2 of 2

General

The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverage listed under the corresponding type of insurance on this page.

The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured.

The Policy shall be endorsed to provide the Owner with not less than 30 day notice in writing in advance of any cancellation or change or amendment restricting coverage.

Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

Commercial General Liability

The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.

The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- (a) Blasting.
- (b) Pile driving and caisson work.
- (c) Underpinning.
- (d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor.

The policy must have the following minimum limits:

- (a) **\$5,000,000** Each Occurrence Limit;
- (b) **\$10,000,000** General Aggregate Limit per policy year if the policy contains a General Aggregate; and
- (c) **\$5,000,000** Products/Completed Operations Aggregate Limit.

Umbrella or excess liability insurance may be used to achieve the required limits.

Builder's Risk / Installation Floater

The insurance coverage provided must not be less than that provided by the latest edition of IBC Forms 4042 and 4047.

The policy must permit use and occupancy of any of the projects, or any part thereof, where such use and occupancy is for the purposes for which a project is intended upon completion.

The policy may exclude or be endorsed to exclude coverage for loss or damage caused by asbestos, fungi or spores, cyber and terrorism.

The policy must have a limit that is **not less than the sum of the contract value** plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Canada at the site of the project to be incorporated into and form part of the finished Work. If the value of the Work is changed, the policy must be changed to reflect the revised contract value.

The policy must provide that the proceeds thereof are payable to Canada or as Canada may direct in accordance with GC10.2, "Insurance Proceeds" (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2900D/2>).

Contractors Pollution Liability

The policy must have a limit usual for a contract of this nature, but not less than **\$1,000,000** per incident or occurrence and in the aggregate.

Aviation Liability

The insurance coverage shall Include Bodily Injury (including passenger Bodily Injury) and Property Damage, in an amount of not less than **\$5,000,000** per incident or occurrence and in the aggregate.

Marine Liability

The insurance coverage must be provided by a Protection & Indemnity (P&I) insurance policy and must include excess collision liability and pollution liability.

The insurance must be placed with a member of the International Group of Protection & Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the *Marine Liability Act*, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by the statutory requirements of the Territory or Province having jurisdiction over such employees.

The policy must waive all rights of subrogation against Canada as represented by Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.

Solicitation No. - N° de l'invitation
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ANNEX B - VOLUNTARY REPORT FOR APPRENTICES EMPLOYED DURING THE CONTRACT (Sample)

(This report is not required at bid deposit)

The Contractor should compile and maintain records on the number of apprentices and their trade that were hired to work on the contract.

The Contractor should provide this data in accordance with the format below. If no apprentices were hired during the contract period, the Contractor should still provide a "nil" report.

The data should be submitted to the Contracting Authority either six months after contract award or at the end of the contract, whichever comes first.

Number of apprentices hired	Trade

(Add rows as needed)

**PUBLICS WORKS AND
GOVERNMENT SERVICES CANADA
Customer Service Team - Socioculturel
Quebec region**

SPECIFICATIONS

**UPGRADING OF MAISON GIRARD
BAIE DE L'ISLE-VERTE
NATIONAL WILDLIFE AREA (NWA)**

PROJECT NO. : R.079387.001

**For
ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC),
CANADIAN WILDLIFE SERVICE**

**Issued for tender
Date: 21 JUILLET 2017**

PWGSC

SECTION	SUBJECT	TOTAL OF PAGES
DIVISION 01	GENERAL REQUIREMENTS	
01 11 01	Work related general information	5
01 29 00	Payment procedures	3
01 33 00	Submittal Procedures	5
01 35 29.06	Health and Safety Requirements	16
01 45 00	Quality Control	3
01 61 00	Common Product Requirements	4
01 74 11	Cleaning	3
01 74 21	Waste management and disposal	2
01 77 00	Closeout Procedures	2
01 78 00	Closeout Submittals	4
DIVISION 02	EXISTING CONDITIONS	
02 41 99	Demolition for minor works	3
DIVISION 05	METALS	
05 50 00	Metal fabrications	4
DIVISION 06	WOOD, PLASTICS AND COMPOSITES	
06 10 20	Rough and Finish Carpentry	7
DIVISION 07	THERMAL AND MOISTURE PROTECTION	
07 21 29.01	Sprayed Insulation - Cellulose	3
07 92 00	Joint sealants	4
DIVISION 08	OPENINGS	
08 61 00	Historic – Wood windows repairs	4
DIVISION 09	FINISHES	
09 91 61	Historic – Repainting Exterior Surfaces	12

END OF CONTENTS

Part 1 General

1.1 DEFINITION

- .1 The following terms used in the different specification sections have the following meaning:
 - .1 Contractor : Any person, society, or company that concludes an agreement with Canada for the carrying out of the Project and who holds a license under the Act of the Province of Quebec on the professional qualification of construction contractors. The contractor is the “master craftsman” by terms of the Loi sur la santé et la sécurité du travail (LSST) and must act as such before the Commission de la santé et de la sécurité du travail (CNESST) and fulfill its obligations in this respect.
 - .2 Project Documents or plans and Specifications: The whole set of bid documents, including architecture engineering specifications, plans and drawings, as well as any drawings sent later on the same work.

1.2 INTERPRETATION

- .1 Terms, expressions and abbreviations of known technical or professional significance are to be understood in the present specification and the present drawings.
- .2 Dimensions shown on drawings or worn or represented by a module or lines, arrows or otherwise shall have priority over the drawings.
- .3 Priority is given to plans or drawings of larger scales. Similarly, the quote and applicable drawings are always the most recent versions.
- .4 Where there is an inconsistency between the dimensions shown on the drawings, the Departmental Representative should be consulted to determine the applicable dimensions. No measure taken on the drawings will be considered for interpretation.
- .5 All inconsistencies between specifications and drawings shall be submitted in writing to the Departmental Representative. The Departmental representative may also render a written decision on the matter without appeal.
- .6 The Specifications and Drawings are complementary. So what is required by one is also dependent on the other. The work to be constructed, in accordance with the specifications and drawings, shall constitute a complete work in its essential parts including in particular, all articles normally derived from the specifications and drawings, even if these are not specially mentioned. The contractor shall not profit, to the detriment of the Customer, from any manifestly unintentional error and from omission that it may find.
- .7 The contractor shall not take advantage of any errors or omissions in the tender documents.
- .8 Where all work or materials are not specifically indicated, the trade body concerned must provide the best quality.

- .9 The Departmental Representative may, for clarification purposes only, provide the Contractor with additional drawings to ensure proper performance of the work. These drawings shall have the same meaning and reach as if they were included in the plans referred to the contract documents.

1.3 WORK AS DEFINED IN CONTRACTUAL DOCUMENTS

.1 Site description:

- .1 Environment and Climate Change Canada (Canadian Wildlife Service) is responsible for the preserving exceptional sites, including the Baie de l'Isle-Verte National Wildlife Area (NWA).
- .2 The Baie de L'Isle-Verte National Wildlife Area (NWA) covers a riparian strip running some 20 kilometres on the south shore of the St. Lawrence Estuary northeast of Rivière-du-Loup. This protected area of 322 hectares was created in 1980 by Environment Canada to protect the intertidal cordgrass marsh of L'Isle-Verte and coastal habitats that are important for waterfowl. The L'Isle-Verte Marsh is one of the largest cordgrass marshes in southern Quebec and it is recognized as a Wetland of International Significance under the Ramsar Convention. More than 100 species of birds are found in this territory, a large proportion of which are possibly breeding. Thousands of migratory birds pass through the wildlife area every spring and fall.
- .3 The Girard House is a Recognized Federal Heritage Building because of its historical associations, and its architectural and environmental values. Builds in 1835, The Girard House is associated with the settlement of the lower St. Lawrence region in Québec. According to local history, the house was built by a prosperous local businessman for the dowry of his daughter. The house was used as a farm residence for over a century. The Girard House is a fine example of a large 'maison québécoise' of the St. Lawrence Valley. Its heritage value resides in the characteristics of its composition, which link it to the St. Lawrence Valley, Québec house type. Its good aesthetic and very good functional design, and the very good craftsmanship and materials that are elements that define its character.
- .4 Maison Girard, 371, route 132, L'Isle-Verte (Québec) G0L 1K0

.2 Summary Description of Work

- .1 Repair damaged parts of the home. Include, but not limited to, the following:
 - .1 Organize work on all items in Division 01 of the estimate.
 - .2 Repair of wood components consisting of walls. Galleries and exterior ramp.
 - .3 Repair and adjustment of wooden doors, windows and storm windows.
 - .4 Painting on exterior wooden walls.
 - .5 Paint work on wooden doors, windows and storm windows.
 - .6 Repair and Adjustment of Gutter and Downspouts.
 - .7 Minor Metal Roof Inspection and Repair.
 - .8 Construction of handrails on two interior staircases and the addition of plywood risers for the basement staircase.
 - .9 Adding insulation to the attic.

1.4 SPECIAL CONDITIONS

- .1 The Contractor shall respect the building's opening and closing hours for interior work.
- .2 The Contractor shall take into account the presence of persons (public and reserve staff) and vehicular traffic in the vicinity.

1.5 CONTRACTOR USE OF PREMISES

- .1 The Contractor is required to obtain the permit or certificate of authorization required to carry out the work with the municipality of L'Isle-Verte and to defray the costs.
- .2 The Contractor shall comply with all federal, provincial or municipal regulations and any laws or regulations pertaining to this work. He will be responsible for any violations of relevant laws and regulations.
- .3 The Contractor shall assume (at its own expense) all obligations relating to the safety measures required by the "Loi sur la santé et la sécurité du travail" of Quebec and all cost arising from such obligations.
- .4 Provide inspections certificates demonstrating that the work is conform to the requirements of the competent authorities.
- .5 Submit to the Departmental Representative a copy of the applications submitted to the above authorities and the approval received.

1.6 NATIONAL WILDLIFE RESERVES LAWS

- .1 For all work to be done within the Baie de L'Isle-Verte National Wildlife Area, carry out all work under the laws and regulations governing National Wildlife Areas.
- .2 NWAs are protected and managed in accordance with the Wildlife Area Regulations under the Canada Wildlife Act.

1.7 CODES AND STANDARDS

- .1 The entire work complies with the requirements of the contract documents and applicable requirements of the most recent edition of document: Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), National Building Code of Canada (NBCC), American Society for testing and Materials (ASTM), Bureau de normalisation du Québec (BNQ), Cahier des charges et devis généraux (CCDG), and others standards and codes indicated herein.

1.8 EXISTING UTILITIES SERVICES

- .1 Befor starting work, define the extent and location of utility lines in the work area and notify the Departmental Representative.
- .2 When non-listed utility lines are discovered, immediately notify the Departmental Representative and record these data in writing.

- .3 Protect, relocated or maintain existing services that are to remain in service for the duration of the work. If non-functional piping is discovered during the work, seal it in a manner authorized by the competent authorities.
- .4 Record location of utility lines that are maintained, moved or abandoned.

1.9 PROTECTION OF EXISTING WORKS

- .1 Special attention should be paid by the Contractor to avoid damage to existing structure.
- .2 The Contractor shall provide all necessary protective equipment for the proper performance of the work.
- .3 The Contractor shall be solely responsible for damages to existing structure and shall restore them to the satisfaction of the Departmental representative and in accordance with the heritage character of the building and with the latest standards in force.
- .4 All costs inherent in the engagement of experts, if any, and to the restoration of any deteriorated elements, shall be covered by the Contractor.

1.10 CONTRACTOR USE OF PREMISES

- .1 Limit use of premises for work and storage to the sectors determined by the Departmental Representative.
 - .1 More specifically, the contractor must mobilise all his equipment and workers in the area specified by the Departmental Representative.
- .2 Do not accumulate unnecessary materials, equipment or stored materials such as to clutter the premises.
 - .1 Move all material or equipment that harm occupant's activities
- .3 For the whole duration of the works, the premises are not to be used as a lodging or temporary residence for the Contractor's employees.
- .4 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .5 The Contractor may use a space identified by the Departmental Representative as a site office and rest area. He shall:
 - .1 Carry out cleaning at the end of each shift
 - .2 Complete cleaning at the end of work
- .6 The contractor will be able to use the toilets of Maison Girard, he will have to maintain the premises throughout the duration of the work.
 - .1 Carry out cleaning at the end of each shift.
 - .2 Complete cleaning at the end of work.

1.11 OCCUPANCY BY THE DEPARTMENTAL REPRESENTATIVE

- .1 The Departmental Representative or partners will occupy the place during entire construction period for execution of normal operations.
- .2 Work with the Departmental Representative in scheduling operations to minimize conflict and to facilitate the Departmental Representative usage.
- .3 The Baie de L'Isle-Verte National Wildlife Area has intense activity during the spring, summer and fall seasons.
- .4 During entire construction period, the National Reserve Area will be open to the public.
- .5 The Reserve's maintenance operations must be maintained.

1.12 MATERIALS AND EQUIPMENT REMOVED

- .1 Materials to be removed become the property of the Contractor and must be removed promptly in accordance with applicable regulations.
- .2 The Contractor is solely responsible for the consequences (damages, claims, etc.) related to the disposition of the waste and any claims that may follow. The Departmental Representative disclaims responsibility for the disposal of excavated waste materials.
- .3 The Contractor shall be required to transport and dispose of all scrap resulting from this work at a site approved by the competent authorities.
- .4 Submit to the Departmental Representative delivery notes from the site where the demolition was delivered.

1.13 REQUIRED DOCUMENTS

- .1 Maintain at job site, one copy each document as follows:
 - .1 Contract Drawings;
 - .2 Specifications;
 - .3 Addenda;
 - .4 Reviewed Shop Drawings;
 - .5 List of Outstanding Shop Drawings;
 - .6 Change Orders;
 - .7 Other Modifications to Contract;
 - .8 Field Test Reports;
 - .9 Copy of Approved Work Schedule;
 - .10 Health and Safety Plan and Other Safety Related Documents;
 - .11 Other documents as specified.

1.14 SITE INSPECTION

- .1 In order to get familiar with specific project conditions and to gather all the information required to successfully execute the contract, carefully inspect the premises.
- .2 Ignorance of site conditions will, in no case, be a valid reason to claim a payment.

1.15 ERRORS AND OMISSIONS

- .1 All contradictions between the plans and existing conditions or errors and omissions in the plans found by the Contractor during the execution of his work must be immediately communicated in writing to the Departmental Representative. If he fails to do so, the Contractor will proceed at his own risk until he receives the Departmental Representative's authorization.

1.16 CALENDAR OF WORK

- .1 The Contractor shall proceed with diligence and commence work preparation immediately upon receipt of notice of acceptance of the Offer.
- .2 Begin work on the site, with the approbation of the Departmental Representative and complete the work (including preparations) no later than 60 working days after receipt of notice of acceptance of the offer.
- .3 Within five working days of notification of acceptance of the bid, the Contractor shall submit a timetable indicating the various stages of completion and the expected completion date.
- .4 Depending on the work schedule and in a form acceptable to the Departmental Representative, provide within ten (10) working days of acceptance of the offer, the dates of submission of shop drawings, Materials and samples.
- .5 Revisions to the work status, based on the submitted implementation schedule, will be made at the discretion of the Departmental Representative. The schedule will be updated weekly by the Contractor with the collaboration and approval of the Departmental Representative.

1.17 WORK SCHEDULE

- .1 Normal occupant hours are Monday to Friday from 8:30 am to 5:00 pm.
- .2 Normal customer ridership hours are from 9:00 am to 5:00 pm.
- .3 Comply with municipal bylaws regarding scheduling of work on site. Contain hours for noisy jobs only between 7:00 am and 7:00 pm and Monday to Friday to minimize impacts on the neighborhood.
- .4 Weekend work is not permitted.

1.18 QUALITY CONTROL ON THE SITE

- .1 Work must be carried out by qualified certified workers or apprentices under the terms of the Provincial Occupational Training and Qualification Act.
- .2 Prior to commencing work, the Contractor shall verify all measurements on site and notify the Departmental Representative of any errors or inconsistencies.
- .3 In the course of work, if nonconformities are detected as a result of pitting errors carried out by the Contractor, the Contractor shall resume the nonconforming works at his expense.

1.19 SITE INSTALLATION

- .1 Prepare a site plan with the following elements (locations and sizes):
 - .1 The area to be fenced and the installation details of the fence
 - .2 The access road to the fenced area and the area to be covered with gravel to prevent mud deposits.
 - .3 Containers
- .2 Provide, install or arrange site facilities to enable work to be carried out as soon as possible.
- .3 Dismantle and dispose of the material when no further use is required.

1.20 SCAFFOLDING

- .1 Scaffolding: Complies with CAN / CSA-S269.2.
- .2 Provide, maintain and maintain scaffolds, ladders and platforms required for the performance of the work.
- .3 The workforce of winches and cranes shall be entrusted to skilled workers.

1.21 CLIMAT CONDITIONS

- .1 The Contractor may not claim any extra amount for unfavorable climate conditions including work in fall or winter or flooding.
- .2 The Contractor must anticipate his work (Protections required) according to potential conditions at the time of at the time of realization and include in its tender the amounts which may be necessary for the resumption of the deficient works caused by climatic conditions.

1.22 DISCOVERY OF DANGEROUS MATERIAL

- .1 Asbestos: The demolition of structures made of or covered with asbestos-containing materials applied by projection or troweling presents health hazards. If materials of this nature are discovered during demolition work, immediately interrupt the works and notify the Departmental Representative.

- .2 PCB (polychlorinated biphenyls): If polychlorinated biphenyls are discovered during demolition work, immediately interrupt the works and notify the Departmental Representative.
- .3 Molds: If mold is discovered during demolition work, immediately interrupt the works and notify the Departmental Representative.

1.23 REHABILITATION OF PLACES

- .1 Reset the place in the same condition as they were on the day the contract was awarded, including grass, shrubs, traffic, adjacent materials, etc., and excluding the amelioration works in the specifications and drawings.

1.24 PARKING ON THE SITE

- .1 Vehicles shall be parked at the site indicated by the Departmental Representative.
- .2 Provide proper site access and maintenance.
- .3 Clean access when using construction equipment.
- .4 Protect grassed areas near building. Repair damaged areas at the end of the work.

1.25 NON-SMOKING ENVIRONMENT

- .1 Smoking restrictions and municipal laws must be respected in all buildings, including the contractor's temporary facilities.

1.26 CUT DOWN TREES AND PROTECTION OF PLANTS

- .1 Protect trees and plants on site and on properties adjacent to storage areas and truck lanes.
- .2 Avoid unnecessary movement, unloading or storage of materials in the vicinity of vegetation to keep in place.

1.27 WORK EXECUTED NEAR THE WATER COURSE

- .1 No construction equipment shall be used in watercourses.
- .2 Do not extract borrowed materials from watercourse bed.
- .3 Do not discharge cuttings, waste materials or debris into watercourses.

1.28 PREVENTION OF POLLUTION

- .1 Maintain temporary facilities to prevent erosion and pollution, and established under this contract.
- .2 Ensure control of emissions from equipment and tools, in accordance with local authority requirements.

- .3 Build temporary shelters to prevent sandblasting materials and other foreign matter from contaminating air and waterways beyond the area of application.
- .4 Sprinkle dry materials and cover garbage to prevent wind from raising dust or debris. Remove dust on temporary paths.

1.29 CLEANING

- .1 Cleaning: Perform cleaning works in accordance with Section 01 74 11 - Cleaning.

1.30 PROTECTION

- .1 Protect installed equipment and components from damage during construction.
- .2 Repair damage to adjacent materials and materials.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

Part 1 General

1.1 UNIT OR INCLUSIVE PRICE

- .1 The total amount of the contract is broken down according to a description of the work paid on a flat-rate basis (table of inclusive sums) and paid word on a unitary basis (unit price table).
- .2 Each of the unit or inclusive prices allocated should include all expenditures, works, outgoings, payments, direct or indirect costs, mobilizations, demobilisation, and act, all facts, and all responsibilities, obligations, omissions and errors of The Contractor related to the completion of this work. These prices also include the transportation and the implementation of the materials, as well as overheads of the company: administration, insurance, contributions, interest, rents, taxes and other incidental expenses. It must include losses and damage that may result from the nature of the work, fluctuations in prices and wages, business risks, strikes, delays not attributable to the Departmental representative, transportation restrictions, accidents and the action of the elements of nature.

1.2 DEFINITIONS

- .1 Inclusive price: When the work is determined in a precise and detailed manner and a price is agreed and accepted by both parties for the whole.
- .2 Unit price: When specifications for work are determined in a precise and detailed manner and all quantities on the schedule are provided as an estimate.

1.3 DESCRIPTION OF THE ARTICLES OF THE TABLE OF FIXED FEE

- .1 Item 1 – Site Organization
 - .1 This section includes site mobilization and demobilization, protection of existing utilities, all elements described in this section, and all requirements outlined in Division 1 (General Requirements) of this Specification. This article also includes all other work that is not an integral part of other article in the schedule.
 - .2 Payment of this item will be made in accordance with the following items:
 - .1 25% on the first monthly payment,
 - .2 50% distributed equally with milestones payments
 - .3 25% with the payment issued upon issuance of the «Substantial (Temporary) Completion Certificate»
- .2 Item 2 – Outdoor Carpentry
 - .1 This item includes the supply, demolition and installation required for all repairs to exterior wall cladding, soffit replacement, gallerie repairs, ramp for persons with reduced mobility, including modifications to the handrail of the ramp.
- .3 Item 3 – Doors and windows
 - .1 Doors: This item includes the supply, demolition and installation required for all required work on the doors. In particular, the adjustment of the weatherstripping and the hardware, the replacement of a threshold and a handle.

- .2 Windows: This item includes the supply, demolition and installation required for all required work on windows and storm windows. In particular, the adjustment of windows and storm windows, weatherstripping and the hardware, repairs and replacement of window elements and storm windows, and painting of windows, storm windows and their components including framing.
- .4 Item 4 – Roofing and Gutter
 - .1 This item includes the supply, demolition and installation required for all repairs to the roof. These include inspecting the cover of the roof, minor repairs to the roofing sheet, adjusting and repairing the gutters, replacing of one downpipe and insulation of the attic.
- .5 Item 5 – Interior works
 - .1 This item includes the supply, demolition and installation required for all interior work. These included the addition of risers and handrails to the staircase leading to the basement, the addition of a handrail to the staircase leading to the attic, modifications to the toiletries and the The raising of a guard on the floor.
- 6. Item 6 – Painting works
 - .1 This item includes the supply, preparation and installation required for all paint work. Notably the preparation of the existing surfaces and the painting, the primer on all the faces of the new elements to be put in place and the painting.

1.4 ADDITIONAL INFORMATION

- .1 Within five (5) days after the award of the contract, the Contractor shall provide a detailed breakdown of the items on the schedule upon request.

1.5 APPLICATIONS FOR PAYMENT

- .1 Submit payments request on a monthly basis as work progresses.
- .2 Payments requests must bear the date of the last day of the agreed monthly payment period. The amount requester must correspond to the value of the work performed and the products delivered to the work site on that date, calculated pro rata to the contract price.
- .3 Submit to the Departmental Representative, at least 14 days prior to the first installment payment request, a statement of the amounts due in respect of the different parts of the work constituting the amount of the contract price, so as to facilitate the evaluation of requests for payment.

1.6 PAYABLE ACCOUNTS

- .1 The statement of amounts available shall be established on the tender form structure and as may be reasonably required by the Departmental Representative as to the supporting documents. Once approved by the Departmental Representative, the statement of amounts due can be used as the basis for payment request.
- .2 Attach to each payment request a statement based on the statement of amounts due.
- .3 Requests for products that have been delivered to the work site but have not yet been incorporated into the work must be supported by any evidence that the Departmental

Representative can reasonably request to establish the value of the products and certify their delivery.

1.7 FINAL PAYMENT

- .1 Submit application for final payment when Work is completed.
- .2 Submit Departmental Representative will, no later than (10) ten days after receipt of application for final payment, review Work to verify validity of application. Departmental Representative will give notification that application is valid or give reasons why it is not valid, no later than (7) seven days after reviewing Work.
- .3 Departmental Representative will issue final certificate for payment when application for final payment is found valid.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE

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

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit drawings stamped and signed by engineer registered or licensed in Province of Quebec, Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow ten (10) days for Departmental Representative's review of each submission.

- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 Submissions include:
 - .1 Preparation date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .9 After Departmental Representative's review, distribute copies.
- .10 Submit an electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.

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

1.3 SAMPLES

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

1.4 MOCK-UPS

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

1.5 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

GENERAL NOTE: in this section the term “site” includes all the facilities located at the site where the work is taking place (construction site, buildings, access, infrastructure, parkings, bays, etc.).

1.1 RELATED REQUIREMENTS

1. Section 01 33 00 – Submittal procedures

1.2 REFERENCES

1. Canada
 - .1 Canadian Standards Association (CSA).
 - .2 Canada Labor Code, Part II, Canada Occupational Safety and Health Regulations.
2. Province of Quebec
 - .1 Loi sur la santé et la sécurité du travail L.R.Q., c. S-2.1 (Act respecting occupational health and safety).
 - .2 Code de sécurité pour les travaux de construction L.R.Q., c. S-2.1, r.4 (Safety code for the construction industry).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

1. Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
2. Submit to Departmental Representative, [and the CNESST] the site-specific prevention program, as outlined in the article “GENERAL REQUIREMENTS”, at least 10 days prior to the start of work.
3. Departmental Representative will review Contractor’s site-specific prevention program and provide comments to Contractor within 10 days after receipt of the document. Revise plan as appropriate and resubmit to Departmental Representative within 5 days after receipt of comments from Departmental Representative. Departmental Representative reserves the right not to authorize the start of work on the construction site as long as the content of the prevention program is not satisfactory. The Contractor shall then update his prevention program and resubmit it to the Departmental Representative if the scope of work changes or if the working methods of the Contractor differ from his initial plans or for any other applicable new condition.
4. Departmental Representative’s review of Contractor’s site-specific prevention program should not be construed as approval of the program and does not reduce the Contractor’s overall responsibility for construction Health and Safety during the work.
5. Submit copies of Contractor’s authorized representative’s construction site health and safety inspection reports to Departmental Representative, once a week.
6. Submit to Departmental Representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by Federal, Provincial and Territorial health and safety inspectors.

7. Submit to Departmental Representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard. The investigation report shall contain at least the following:
 - .1 Date, time and place of accident;
 - .2 Name of sub-contractor involved in the accident;
 - .3 Number of persons involved and condition of wounded;
 - .4 Witness Identification;
 - .5 Detailed description of tasks performed at the time of the accident;
 - .6 Equipment being used to accomplish the tasks performed at the time of the accident;
 - .7 Corrective measures taken immediately after the accident;
 - .8 Causes of the accident;
 - .9 Preventive measures that have been put in place to prevent a similar accident.
8. Submit to Departmental Representative WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 – Submittals. Contractor must also keep one copy of these documents on the construction site.
9. Medical Surveillance: where prescribed by legislation, regulation or prevention program, submit certification of medical surveillance for construction site personnel prior to commencement of Work, and submit additional certifications for any new construction site personnel to Departmental Representative.
10. Submit to Departmental Representative an on-site Emergency Response Plan at the same time as the prevention program. The Emergency Response plan must contain the elements listed in the article “GENERAL REQUIREMENTS” of this section.
11. Submit to Departmental Representative copies of all training certificates required for the application of the prevention program, in particular (if applicable) for the following:
 - .1 First aid in the workplace and cardiopulmonary resuscitation;
 - .2 Work likely to release asbestos dust (mandatory for all work where asbestos is present);
 - .3 Work in confined spaces (mandatory for all work in confined spaces);
 - .4 Lockout-tagout procedures (mandatory for all work requiring lockout);
 - .5 Safely operating forklift trucks (mandatory for all forklift usage);
 - .6 Safely operating elevating work platforms (mandatory for the use of all elevating platforms);
 - .7 Any other requirement of Regulations or the safety program.
 8. In addition, the certifications of the *Cours de santé et sécurité générale pour les chantiers de construction* (General Health and Safety Training for Construction Sites) shall be available on demand on the construction site. #
12. Engineer's plans and certificates of compliance: Contractor must submit to the Departmental Representative and to the *Commission des normes, de l'équité, de la santé et de la sécurité du travail* (CNESST) a copy signed and sealed by engineer of all plans and certificates of compliance required pursuant to the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry) or by any other

legislation or regulation or by any other clause in the specifications or in the contract. The Contractor must also submit a certificate of conformity signed by an engineer once the facility for which these plans were prepared has been completed and before a person uses the facility. A copy of these documents must be available on site at all times.

1.4 FILING OF NOTICE OF CONSTRUCTION SITE OPENING

1. Notice of construction site opening shall be submitted to the CNESST before work begins. A copy of such notice and acknowledgment of receipt from the CNESST shall be submitted to Departmental Representative.
2. At the completion of all the work, a notice of construction site closing shall be submitted to the CNESST, with a copy to Departmental Representative.
3. The Contractor shall assume the role of being the Principal Contractor in the limits of the construction site and elsewhere where he must execute work within the framework of this project. The Contractor shall recognize the responsibility of being the Principal Contractor of the project and identify himself as such in the notice of the construction site opening he provides to the CNESST.
4. The Contractor shall accept to divide and identify the construction site adequately in order to define time and space at all times throughout the course of the project.

1.5 HAZARD ASSESSMENT

1. The contractor must perform construction site specific safety hazard assessment related to project.

1.6 MEETINGS

1. Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.
2. Contractor's representative with decision power must attend any meetings at which construction site safety and health issues are to be discussed.
3. If it is anticipated that there will be 25 workers or more on the construction site at any given time, the Contractor shall set up a worksite committee and hold meetings as required by the *Code de sécurité pour les travaux de construction* (S-2.1, r. 4) (Safety code for the construction industry). A copy of the minutes of the meetings of the committee shall be provided to the Departmental Representative no later than 5 days after the committee meeting.

1.7 REGULATORY REQUIREMENTS

1. Do the Work in accordance with Section 01 41 00 - Regulatory Requirements.
2. Comply with all legislation, regulations and standards applicable to the construction site and its related activities.
3. Comply with specified standards and regulations to ensure safe operations on a site containing hazardous or toxic materials.
4. Always use the most recent version of the standards specified in the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), notwithstanding the date indicated in that *Code*.

1.8 COMPLIANCE REQUIREMENTS

1. Comply with the *Loi sur la santé et la sécurité du travail* (L.R.Q., c. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r. 4.) (Safety code for the construction industry) in addition to respecting all the requirements of this specification manual.

1.9 RESPONSIBILITIES

1. The Contractor must acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the *Loi sur la santé et la sécurité du travail* (L.R.Q., ch. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry).
2. The Contractor must be responsible for health and safety of persons on construction site, safety of property on construction site and for the protection of persons adjacent to construction site and the environment to the extent that they may be affected by conduct of the work.
3. No matter the size or location of the construction site, the Contractor must clearly define the limits of the construction site by physical means and respect all specific regulation requirements applicable in this regard. The means chosen to define the limits of the construction site must be submitted to the Departmental Representative.
4. Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific prevention Plan.

1.10 WORK PERFORMED BY EXTERNAL CONTRACTORS

1. Not used.

1.11 GENERAL REQUIREMENTS

1. Before undertaking the work, prepare a site-specific prevention program based on the hazards identified according to the article "HAZARD ASSESSMENT" and the article "RISKS INHERENT TO THE WORKSITE" in this section. Apply this program in its totality from the start of the project until demobilization of all personnel from the construction site. The prevention program shall take into consideration the specific characteristics of the project and cover all the work to be executed on the construction site.
2. The safety program must include at least the following:
 - .1 Company safety and health policy;
 - .2 Description of the stages of the work;
 - .3 Total costs, schedule and projected workforce curves;
 - .4 Flow chart of safety and health responsibilities;
 - .5 Physical and material layout of the construction site;
 - .6 Risk assessment for each stage of the work, including preventive measures and the procedures for applying them;

- .7 Identification of the preventive measures relative to the specific risks inherent to the worksite indicated in the article "RISKS INHERENT TO THE WORKSITE";
- .8 Identification of preventive measures for health and safety of employees and / or public works site as indicated in the article "SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC";
- .9 Training requirements;
- .10 Procedures in case of accident/injury;
- .11 Written commitment from all parties to comply with the safety program;
- .12 Construction site inspection checklist based on the preventive measures;
- .13 Emergency response plan which shall contain at least the following:
 - .1 Construction site evacuation procedures;
 - .2 Identification of resources (police, firefighters, ambulance services, etc.);
 - .3 Identification of persons in charge of the construction site;
 - .4 Identification of the first-aid attendants;
 - .5 Communication organizational chart (including the person responsible for the site and the Departmental Representative);
 - .6 Training required for those responsible for applying the plan;
 - .7 Any other information needed, in the light of the construction site's characteristics.
- 3. Departmental Representative may respond in writing, where deficiencies or concerns are noted in the prevention program and may request resubmission with correction of deficiencies or concerns.
- 4. In addition to the prevention program, during the course of the work the Contractor shall elaborate and submit to the Departmental Representative specific written procedures for any work having a high risk factor of accident (for example: demolition procedures, specific installation procedures, hoisting plan, procedures for entering a confined space, procedures for interrupting electric power, etc.) or at the request of the Departmental Representative.
- 5. The Contractor shall plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment.
- 6. Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- 7. All mechanical equipment (for example, but not limited to: hoisting devices for persons or materials, excavators, concrete pumps, concrete saws) shall be inspected before delivery to the construction site. Before using any mechanical equipment, the Contractor shall obtain a certificate of compliance signed by a qualified mechanic dated less than a week prior to the arrival of each piece of equipment on the construction site; the certificate shall remain on the construction site and transmitted to the Departmental Representative on demand.

8. Ensure all inspections (daily, periodic, annual, etc.) for the hoisting devices for persons or materials required by the current standards are carried out and be able to provide a copy of the inspection certificates to the Departmental Representative on demand.
9. The Departmental Representative can at all times, if he suspects a malfunction or the risk of an accident, order the immediate stop of any piece of equipment and require an inspection by a specialist of his choice.
10. The Departmental Representative must be consulted for the location of storing gas cylinders and tanks on the construction site.

1.12 RISKS INHERENT TO THE WORKSITE

1. In addition to the risks related to the tasks to be carried out, personnel responsible for the execution of the work on the construction site will be exposed to the following risks inherent to the area where the work will be executed. At the worksite there is in particular the presence of the following:
 - .1 Trees and landscaping to preserve and protect

1.13 SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC

1. The worksite is occupied by employees and/or the public during the works period. The Contractor shall consider this constraint in his specific requirements for the protection of employees and / or the public. These requirements must be included in the Contractor's site-specific safety plan as well as any other measures provided by the Contractor to protect the health and safety of employees and / or the public on the site.

1.14 UNFORESEEN HAZARDS

1. Whenever a source of danger not defined in the specifications or identified in the preliminary construction site inspection arises as a result of or in the course of the work, the Contractor must immediately suspend work, notify the person responsible for health and safety on the construction site, take appropriate temporary measures to protect the workers and the public and notify Departmental Representative, both verbally and in writing. Then the Contractor must do the necessary modifications to the prevention program or apply the security measures required in order to resume work.

1.15 PERSON IN CHARGE OF HEALTH AND SAFETY

1. If the construction site meets the requirements of article 2.5.3 of the *Code de la sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), the Contractor needs to hire a competent person authorized as a safety officer and appoint this person full time from the beginning of the work. This person's tasks shall solely be dedicated to the management of health and safety on the construction site. This safety officer must have the following qualifications:
 - .1 Have a safety officer certificate issued by the CNESST since a minimum of 5 years;
 - .2 Have site-related working experience specific to the activities associated with the present project;

- .3 Have working knowledge of occupational health and safety regulations in the workplace;
 - .4 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter the construction site to perform work;
 - .5 Be responsible for implementing, enforcing in detail and monitoring site-specific Contractor's Health and prevention program;
 - .6 Be on construction site at all times during execution of work;
 - .7 Inspect the work and ensure compliance with all regulatory requirements and those indicated in the contract documents or the site-specific prevention program.
 - .8 Keep a daily log of actions taken and submitting a copy to Departmental Representative each week.
2. The safety officer's certificate shall be submitted to the Departmental Representative before the start of the work.
 3. When the hiring of a safety officer is not required or if this person is hired by the Departmental Representative, the Contractor shall designate a competent person to supervise and take responsibility for health and safety, no matter the size of the construction site or how many workers are present at the workplace. This person shall be on construction site at all times and be able to take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the construction site and likely to be affected by any of the work. The Contractor shall submit the name of this person to the Departmental Representative before the start of work.

1.16 POSTING OF DOCUMENTS

1. Ensure applicable items, articles, notices and orders are posted in conspicuous location on construction site in accordance with Acts and Regulations of the Province, and in consultation with Departmental Representative.
2. At a minimum, the following information and documents must be posted in a location readily accessible to all workers:
 - .1 Notice of construction site opening;
 - .2 Identification of principal Contractor;
 - .3 Company OSH policy;
 - .4 Site-specific prevention program;
 - .5 Emergency plan;
 - .6 Minutes of worksite committee meetings;
 - .7 Names of worksite committee representatives;
 - .8 Names of the first-aid attendants;
 - .9 Action reports and correction notices issued by the CNESST.
 - .10 Material Safety Data Sheets for all controlled product used on site.

1.17 INSPECTION OF THE CONSTRUCTION SITE AND CORRECTION OF NON-COMPLIANCES

1. Inspect the construction site and complete the construction site inspection checklist and submit it to the Departmental Representative in accordance with the article "ACTION AND INFORMATIONAL SUBMITTALS" in this section.
2. Immediately take all necessary measures to correct any situations deemed non-compliant during the inspections mentioned in the previous paragraph or noticed by the authorities having jurisdiction or the Departmental Representative or his agent.
3. Submit to Departmental Representative written confirmation of all measures taken to correct the situation in case of non-compliance in matters pertaining to health and safety.
4. The Contractor shall give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order cessation and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and construction site workers and environmental protection take precedence over cost and scheduling considerations.
5. The Departmental Representative or his agent may order cessation of work if the Contractor does not make the corrections needed to conditions deemed non-compliant in matters pertaining to health and safety. Without limiting the scope of the preceding articles, the Departmental Representative may order cessation of work if, in his view, there is any hazard or threat to the safety or health of construction site personnel or the public or to the environment.

1.18 PREVENTION OF VIOLENCE

1. Health and safety management of Public Works and Government Services Canada construction sites includes the implementation of measures designed to protect the psychological health of all persons who access the construction site where the work is taking place. Consequently, in addition to physical violence, verbal abuse, intimidation and harassment are not tolerated on the construction site. Any person who demonstrates such actions or behaviors will receive a warning and/or could be definitely expelled from the construction site by the Departmental Representative.

1.19 BLASTING

1. Not used.

1.20 POWDER ACTUATED DEVICE

1. Use powder actuated devices only after receipt of written permission from Departmental Representative.
2. Any person using an explosive actuated tool shall hold a training certificate and meet all requirements of Section 7 of the *Code de sécurité pour les travaux de construction* (S- 2.1, r. 4). (Safety code for the construction industry)
3. Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

1.21 USE OF PUBLIC ROADS

1. Not used.

1.22 LOCKOUT-TAGOUT

1. Not used.

1.23 ELECTRICAL WORK

1. Not used.

1.24 ASBESTOS EXPOSURE

1. Not used.

1.25 FUNGAL CONTAMINATION

1. Not used.

1.26 EXPOSURE TO SILICA

1. Not used.

1.27 SANDBLASTING

1. Not used.

1.28 LEAD-BASE PAINT REMOVAL

1. Prior to all work where workers are likely to handle materials containing lead-base paint or other substances containing lead, the Contractor must:
 - .1 Provide a written procedure for the work which respects all the requirements of the *Code de sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry), as well as the requirements indicated in the document “*Guideline for Lead on Construction Projects*” published by the Ontario Ministry of Labour (http://www.labour.gov.on.ca/english/hs/pdf/gl_lead.pdf). If there is a discrepancy between the Québec regulation and the Ontario document, the most stringent requirement shall apply.
 - .2 Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.29 EXPOSURE TO ANIMAL’S FECAL DROPPINGS

1. Not used.

1.30 RESPIRATORY PROTECTION

1. Contractor must ensure that all workers who must wear a respirator as part of their duties have received training for that purpose as well as fit testing of their respirator, in accordance with CSA Standard Z94.4 *Selection, use and care of respirators*. Submit the certificates of the fit testings to the Departmental Representative on demand.

1.31 FALL PROTECTION

1. Plan and organize work so as to eliminate the risk of fall at the source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.
2. Every person using an elevating platform (scissors, telescopic mast, articulated mast, rotative mast, etc.) must have a training regarding this equipment.
3. The use of a safety harness is mandatory for all elevating platforms with telescopic, articulate or rotative mast.
4. Define the limits of the danger zone around each elevating platform.
5. All openings in a floor or roof must be surrounded by a guardrail or provided with a cover fixed to the floor able to withstand the loads to which it could be exposed, regardless of the size of the opening and the height of the fall it represents.
6. Everyone who works within two metres from a fall hazard of three metres or more must use a safety harness in accordance with the requirements of the regulation, unless there is a guardrail or another device offering an equivalent safety.
7. Despite the requirements of the regulation, the Departmental Representative may require the installation of a guardrail or the use of a safety harness for specific situations presenting a risk of fall less than three metres.

1.32 SCAFFOLDINGS

1. In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who uses scaffoldings must respect the following requirements:
 - .1 Foundation
 - .1 Scaffoldings shall be installed on a solid foundation so that it does not slip or rock.
 - .2 Contractors wishing to install scaffoldings on a roof, overhang, canopy or awning shall submit their calculations and loads, as well as plans signed and sealed by an engineer to the Departmental Representative and obtain his authorization before beginning installation.
 - .2 Assembly, bracing and mooring
 - .1 All scaffoldings shall be assembled, braced and moored in accordance with the manufacturer's instructions and the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
 - .2 Where a situation requires the removal of part of the scaffoldings (e.g., crosspieces), the Contractor shall submit to the Departmental Representative an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
 - .3 For scaffoldings where the span between two supports is greater than three metres, the Contractor shall provide the Departmental Representative an assembly plan signed and sealed by an engineer.

- .3 Protection against falls during assembly
 - .1 Workers exposed to the risk of falling more than three metres shall be protected against falls at all times during assembly.
- .4 Platforms
 - .1 Scaffolding platforms shall be designed and installed in accordance with the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
 - .2 If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry)
 - .3 Scaffoldings of four sections (or six metres) high or more shall have a full platform covering the entire surface between the putlogs every three metres high or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.
- .5 Guardrails
 - .1 A guardrail shall be installed on every landing.
 - .2 Cross braces shall not be considered as guardrails.
 - .3 If the platforms are not covering the entire surface between the putlogs, the guardrail must be installed just above the edge of the platform so that there is no empty horizontal space between the platform and the guardrail.
 - .4 Where scaffoldings has four sections (or six metres) high or more and full platforms are required, the guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.
- .6 Access
 - .1 The Contractor shall ensure that access to the scaffoldings does not compromise worker safety.
 - .2 Where the platforms of the scaffoldings are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
 - .3 Notwithstanding the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), stairs shall be installed on all scaffoldings that have six or more rows of uprights or is six sections (or nine metres) high or higher.
- .7 Protection of the public and occupants
 - .1 When scaffoldings are installed in a zone accessible to the public, the Contractor shall take the necessary measures to prevent the public from having access to them and, if applicable, to the work or storage area located in the vicinity of these scaffolding.
 - .2 Contractor must install covered walkways, nets or other similar devices to protect workers, the public and the occupants against falling objects. The means of protection must be approved by the Departmental representative.

.8 Engineering plans

- .1 In addition to those required by the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Departmental Representative reserves the right to require engineering plans for other types or configurations of scaffoldings.
- .2 A plan signed and sealed by an engineer is required for all scaffoldings that will be covered with a canvas, a tarpaulin or any other material that has wind resistance.
- .3 A certificate of conformity signed by an engineer is required in all cases where an engineering plan is required before anybody uses the facility. A copy of these documents must be available on the construction site at all times.

1.33 CONFINED SPACES

1. Not used.

1.34 EXCAVATION WORK

1. Not used.

1.35 LIFTING LOADS WITH CRANE OR BOOM TRUCK

1. Not used.

1.36 HOT WORK

Hot work means any work where a flame is used or a source of ignition may be produced, i.e., riveting, welding, cutting, grinding, burning, heating, etc.

- .1 Before the beginning of each shift of work and for each sector, the Contractor must obtain a "Hot Work Permit" emitted by the person responsible for the site.
- .2 A working portable fire extinguisher suitable to the fire risk shall be available and easily accessible within a 5 m radius from any flame, spark source or intense heat.
- .3 The Contractor must appoint an individual to do continuous monitoring of the fire risks for a period of one (1) hour after the end of the shift of hot work. This individual shall sign the section for this purpose on the permit and give it to the person in charge of the construction site after the one-hour period.
- .4 When the hot work is done in areas where there is combustible materials or where the walls, ceilings or floors are made of or covered with combustible materials, a final inspection of the work area must be scheduled four (4) hours after the work has finished. Unless specified otherwise by the Departmental Representative, the Contractor must assign a person to carry out this monitoring.

Welding and cutting:

In addition to the requirements prescribed in the preceding paragraphs, the Contractor must respect the following requirements:

- .5 Welding and cutting work must be carried out in accordance with the requirements of the *Code de Sécurité pour les travaux de construction*, S-2.1, r.4

(Safety code for the construction industry) and CSA standard W117.2, Safety in Cutting, Welding and Allied Processes.

- .6 Air extraction system with filters must be used for all welding and cutting work performed inside.
- .7 Stop all activities producing flammable or combustible gas, vapours or dust in the vicinity of the welding or cutting work.
- .8 Store all compressed gas cylinder on a fireproof fabric and make sure that the room is well ventilated.
- .9 Store all oxygen cylinders more than 6 metres from a flammable gas cylinder (ex: acetylene) or a combustible such as oil or grease, unless the oxygen cylinder is separated from it by a wall made of non-combustible material as mentioned in the article 3.13.4 of the *Code de sécurité pour les travaux de construction, S-2, r. 6* (Safety code for the construction industry)
- .10 Store the cylinders far from all heat sources.
- .11 Not to store the cylinders close to the staircases, exits, corridors and elevators.
- .12 Do not put acetylene in contact with metals such as silver, mercury, copper and alloys of brass having more than 65% copper to avoid the risk of an explosive reaction.
- .13 Check that welding equipment with electric arc has the necessary tension and are grounded.
- .14 Ensure that the conducting wires of the electric welding equipment are not damaged.
- .15 Place the welding equipment on a flat ground away from the bad weather.
- .16 Install fireproof canvas when the welding work is done in a superposition and where there is the risk of falling sparks.
- .17 Move away or protect the combustible materials which are closer than 15 metres from the welding work.
- .18 Prohibition to weld or cut any closed container.
- .19 Do not perform any cutting, welding or work with a naked flame on a container, a tank, a pipe or other container containing a flammable or explosive substance unless:
 - .1 they have been cleaned and air samples indicating that work can be done without danger has been taken; and
 - .2 provisions to ensure the safety of the workers have been made.

1.37

ROOFING WORK

- 1. Protection against fall from heights
 - .1 Guardrails:
 - .1 Installation of guardrails is mandatory at all times; however, the installation of a warning line is allowed to define the limits of the work zones provided that all the requirements of the articles 2.9.4.0 and 2.9.4.1 of the *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry) are respected.

- .2 The guardrails must remain in place until the end of the project. The Departmental Representative will authorize their dismantling when he can confirm that all the work, inspections and corrections have been made.
- .2 Harnesses:
 - .1 Workers installing guardrails must wear safety harnesses.
 - .2 Workers installing and modifying guardrails or flashing shall wear safety harnesses in the event guardrails must be moved temporarily.
 - .3 Workers shall wear safety harnesses when receiving material and giving directions to the crane operator next to a drop.
 - .4 Safety harnesses shall be worn when carrying out work next to a drop where collective protection is not sufficiently safe.
 - .5 The Contractor shall provide a fastening method and safety cable system compliant with section 2.10.12 of the *Code de sécurité pour les travaux de construction (L.R.Q., S-2.1, r.4)* (Safety code for the Construction Industry) for each construction site or location.
- .3 Scales:
 - .1 All ladders shall be sufficient length to exceed the bearing by at least three steps.
 - .2 All ladders shall be attached at their apex so that they can not slide laterally. The Contractor must establish a system to comply with this rule during finishing work (flashing, ...).
- 4. Scaffolding:
 - 1. All scaffolds shall be inspected and assembled in accordance to the provisions of the Safety Code for Construction Work (L.R.Q., S-2.1, r.6)
 - 2. Where required, plans and attestations of compliance shall be forwarded to the Departmental Representative prior to commencement of work.
 - 3. When assembling scaffolds, the Contractor shall ensure that all workers are constantly against falls in accordance to section 3.9.4.5 of the Safety Code for Construction work (RSQ, S-2.1, 6).
- 2. Lifting of materials
 - .1 For all winch installations, the Contractor shall provide the Departmental Representative with the installation method recommended by the manufacturer. If unavailable, the Contractor shall then provide an installation procedure signed and sealed by an engineer. The installation procedure must take into account load-bearing capacity, the amount, weight and location of counterweight and any other detail that may affect the capacity and stability of the device.
 - .2 The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed or scrapped.
 - .3 Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.
 - .4 In all cases where a crane or boom truck is used, the Contractor must respect the requirements of the paragraph Lifting Loads With Crane or Boom Truck, in this section.

3. Protection against fire
 - .1 The storage and use of propane cylinders shall comply with the standard CAN/CSA-B149.2, *Propane Storage and Handling Code*. The cylinders shall be stored outdoors, in a safe place, away from any unauthorized handling, in a storage cabinet specially designed for this purpose. The cylinders shall be securely kept upright and locked at all times in a place where no vehicles are allowed unless the cylinders are protected by barriers or similar protection.
 - .2 The number of propane cylinders on the roof shall not exceed the number of cylinders necessary for a day's work, and cylinders shall at all times be secured upright or held in a cart designed for this purpose.
 - .3 All hot work (burning, heating, riveting, welding, cutting, grinding, etc.) must be done in accordance with paragraph "Hot Work" in this section.
4. Material and waste management
 - .1 On the roof, light material and sheet material shall be kept in containers or be securely fastened. In the event this requirement is disregarded in the slightest way, the Departmental Representative may disallow the storage of materials on the roof.
 - .2 Waste shall be discarded as produced using a waste chute or appropriate containers. The Contractor shall provide the means to prevent waste from being carried away by the wind.
 - .3 All waste must be removed from the roof at the end of shifts.
 - .4 Unless otherwise authorized by the Departmental Representative, all waste bins must be placed at least 3 m from any structure or building.
5. Protection of occupants and the public
 - .1 Contractor must install covered passageways, nets or other devices above the entrances and the exits of the building to protect the workers, the public and the occupants against falling object. The means of protection must be approved by the Departmental Representative.
 - .2 A safety perimeter on the ground must be placed under the work zone in order to protect the workers, the public and the occupants.
 - .3 The ground construction site, material handling area and boiler area shall be clearly sealed off to prevent occupants or the public from accessing the construction site and areas.
 - .4 Before installing any device that may emit gas or fumes, the Contractor shall receive authorization from the person in charge of the construction site, who shall make sure that there is no risk of gas or fumes infiltrating the building's ventilation system.

1.38 STEEL STRUCTURE ERECTION OR DISMANTLING WORK

1. Not used.

1.39 WORK NEAR BODIES OF WATER

1. Not used.

1.40 INTERIOR USE OF INTERNAL COMBUSTION ENGINES

1. Not used.

1.41 TEMPORARY HEATING

1. Not used.

1.42 WORK NEAR OVERHEAD POWER LINES

1. Not used.

1.43 DIVING OPERATIONS

1. Not used.

1.44 HEALTH AND SAFETY SUBORDINATION AGREEMENT

1. Not used.

Partie 2 Products

2.1 NOT USED

1. Not Used.

Partie 3 Execution

3.1 NOT USED

1. Not Used.

END OF SECTION

Part 1 General

1.1 INSPECTION

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

1.2 INDEPENDENT INSPECTION AGENCIES

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

1.3 ACCESS TO WORK

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

1.4 PROCEDURES

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

1.5 REJECTED WORK

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

1.6 REPORTS

- .1 Submit 3 paper copies and one electronic PDF copy of inspection and test reports to Departmental Representative.

1.7 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by Departmental Representative and may be authorized as recoverable.

1.8 MILL TESTS

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

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Within text of each specifications section, reference may be made to reference standards.
- .2 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether products or systems are in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor Design-Builder in event of non-conformance.

1.2 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. The contractor will remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.3 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.4 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Do not remove from packaging or bundling until required in Work.
- .4 Store products subject to damage from weather in weatherproof enclosures.
- .5 Protect finish of wood and steel parts.
- .6 Store cementitious products clear of earth or concrete floors, and away from walls.
- .7 Store fill materials clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .8 Store sheet materials, lumber on flat, solid supports and keep clear of ground.
 - .1 Slope to shed moisture.
- .9 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .10 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .11 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .12 Touch-up damaged factory finished surfaces to Departmental Representative's DCC Representative's Consultant's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.5 TRANSPORTATION

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

1.6 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.7 QUALITY OF WORK

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

1.8 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.9 REMEDIAL WORK

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

1.10 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.

- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.11 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. In specified locations, use hot-dip galvanized steel bolts. Use No. 304 stainless steel connection pieces, screws and nails, for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.12 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 PROJECT CLEANLINESS

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

1.2 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris including that caused by Owner.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.

- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .14 Remove dirt and other disfiguration from exterior surfaces.
- .15 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .16 Sweep and wash clean paved areas.
- .17 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .18 Clean roofs, downspouts, and drainage systems.
- .19 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .20 Remove snow and ice from access to building.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse or recycling in accordance with Section 01 74 21- Construction/Demolition Waste Management And Disposal.
- .2 It is prohibited to bury construction, renovation, demolition and /or detritus, liquid or solid waste on site.
- .3 It is prohibited to dump construction, renovation, demolition and / or detritus, liquid or solid wastes into watercourses, sanitary sewers or storm sewers.

1.4 STORAGE, HANDLING AND WASTE PROTECTION

- .1 Store construction waste, renovation, demolition in safe, weatherproof, stolen and vandalized locations.
- .2 Unless otherwise specified, construction, renovation and demolition waste that is to be disposed of shall not become the property of the Contractor.
- .3 Separate non-recoverable waste from reusable and / or recoverable waste.
- .4 Transport and deliver non-recoverable waste to authorized disposal facilities.
- .5 Transport and deliver recoverable waste to diversion routes.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 WASTE MANAGEMENT GOALS

- .1 Prior to start of Work conduct meeting with Departmental Representative to review and discuss waste management plan and goals.
- .2 Minimize amount of non-hazardous solid waste generated by project.
- .3 Protect environment and prevent environmental pollution damage.
- .4 Submit required documents in accordance with Section – 01 33 00 – Submittal procedure.

1.2 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Protect components not removed and not demolished from movement or damage.
- .5 Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .6 Protect surface drainage, mechanical and electrical from damage and blockage.
- .7 Separate and store materials produced during project in designated areas.
- .8 During temporary door and window removal, occlude openings by using a material composition consisting of painted plywood, air barrier, mat insulation and, natural plywood on the outside.
- .9 Ensure that there are sufficient exits at all times during the work on the door.

1.3 DISPOSAL OF WASTES

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste into waterways, storm, or sanitary sewers.
- .3 Remove materials on-site as Work progresses.

1.4 USE OF SITE AND FACILITIES

- .1 Execute Work with minimal interference and disturbance to normal use of premises.
- .2 Maintain security measures established by facility provide temporary security measures approved by Departmental Representative.

1.5 SCHEDULING

- .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 APPLICATION

- .1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

3.2 CLEANING

- .1 Final Cleaning: upon completion remove equipment and dispose of waste. Leave the site clean and tidy.
- .2 Clean the site as Work progresses.

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: Contractor conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request Departmental Representative inspection.
 - .2 Departmental Representative Inspection:
 - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
 - .2 Contractor to correct Work as directed.
 - .3 Completion Tasks: submit written certificates in French that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Work: complete and ready for final inspection.
 - .4 Final Inspection:
 - .1 When completion tasks are done, request final inspection of Work by Departmental Representative, and Contractor.
 - .2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection.
 - .5 Declaration of Substantial Performance: when Departmental Representative considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
 - .6 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
 - .7 Final Payment:
 - .1 When Departmental Representative considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.
 - .2 Refer to Contract Documents: when Work deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

- .8 Payment of Holdback: after issuance of Certificate of Substantial Performance of Work, submit application for payment of holdback amount in accordance with contractual agreement.

1.2 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11- Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, 2 paper copies and one electronic copy of operating and maintenance manuals in French.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.2 CONTENTS - PROJECT RECORD DOCUMENTS

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

1.3 AS -BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.

- .2 Store record documents and samples in field office apart from documents used for construction.
 - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
 - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.4 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
 - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.

1.5 MATERIALS AND FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
 - .1 Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

1.6 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to site location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and for review by Departmental Representative.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 REFERENCE STANDARDS

- .1 CSA International
 - .1 CSA S350-[M1980(R2003)], Code of Practice for Safety in Demolition of Structures.
- .2 National Research Council Canada (NRC)
 - .1 National Building Code of Canada 2015 (NBC).
 - .2 National Fire Code of Canada 2015 (NFC).
- .3 U.S. 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.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 74 21- Construction/Demolition Waste Management Disposal and 01 33 00- Submittal Procedures.
- .2 Submit demolition drawings:
 - .1 Submit for review and approval by Departmental Representative shoring and underpinning drawings stamped and signed by professional engineer registered or licensed in the Province of Quebec, Canada, showing proposed method.

1.3 SITE CONDITIONS

- .1 Review "Designated Substance Report" and take precautions to protect environment.
- .2 If material resembling spray or trowel-applied asbestos or other designated substance listed as hazardous be encountered, stop work, take preventative measures, and notify Departmental Representative immediately.
 - .1 Proceed only after receipt of written instructions have been received from Departmental Representative.
- .3 Notify Departmental Representative before disrupting building access or services.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 EXAMINATION

- .1 Inspect building with Departmental Representative and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.
- .3 Notify and obtain approval of utility companies before starting demolition.
- .4 Disconnect, cap, plug or divert, as required, existing public utilities within the property where they interfere with the execution of the work, in conformity with the requirements of the authorities having jurisdiction. Mark the location of these and previously capped or plugged services on the site and indicate location (horizontal and vertical) on the record drawings. Support, shore up and maintain pipes and conduits encountered.
 - .1 Immediately notify Departmental Representative and utility company concerned in case of damage to any utility or service, designated to remain in place.
 - .2 Immediately notify the Departmental Representative should uncharted utility or service be encountered, and await instruction in writing regarding remedial action.

3.2 PREPARATION

- .1 Protection of In-Place Conditions:
 - .1 Prevent movement, settlement, or damage to adjacent parts of building to remain in place. Provide bracing and shoring required.
 - .2 Keep noise, dust, and inconvenience to occupants to minimum.
 - .3 Protect building systems, services and equipment.
 - .4 Provide temporary dust screens, covers, railings, supports and other protection as required.
 - .5 Do Work in accordance with Section 01 35 29.06- Health and Safety Requirements.
- .2 Demolition/Removal:
 - .1 Remove items as indicated.
 - .2 Removal of Pavements, Curbs and Gutters:
 - .1 Square up adjacent surfaces to remain in place by saw cutting or other method approved by [Consultant] [Departmental Representative] [DCC Representative].
 - .2 Protect adjacent joints and load transfer devices.
 - .3 [Protect underlying and adjacent granular materials].
 - .3 Remove parts of existing [building]to permit new construction.
 - .4 Trim edges of partially demolished building elements to tolerances as defined by [Departmental Representative] [Consultant] [DCC Representative]to suit future use.

3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.
- .3 Refer to drawings and specifications for items to be salvaged for reuse.
- .4 Waste Management: separate waste materials for reuse in accordance with Section 01 74 21- Construction/Demolition Waste Management.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION

Approved: 2010-06-30

Part 1 General

1.1 REFERENCE STANDARDS

- .1 ASTM International
 - .1 ASTM A53/A53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - .2 ASTM A269-08, Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
 - .3 ASTM A307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .2 CSA International
 - .1 CSA G40.20/G40.21-[04(R2009)], General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CAN/CSA G164-[M92(R2003)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA S16-[09], Design of Steel Structures.
 - .4 CSA W48-[06], Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
 - .5 CSA W59-[M03(R2008)], Welded Steel Construction (Metal Arc Welding) [Metric].
- .3 Green Seal Environmental Standards (GS)
 - .1 GS-11-2008, 2nd Edition, Paints and Coatings.
- .4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - current edition.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for proposed sections, bolts, screws, tubing, plates and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies of WHMIS MSDS in accordance with Section 01 35 29.06- Health and Safety Requirements.
 - .1 For finishes, coatings, primers, and paints applied on site: indicate VOC concentration in g/L.
- .3 Shop Drawings:

- .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Quebec, Canada.
- .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.
- .4 Foresee the construction of an on-site mock-up for railing work and submit to the Departmental Representative. The mock-up must be 1 m long.

1.3 QUALITY ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certifications: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00- Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

Part 2 Products

2.1 MATERIALS

- .1 Steel sections and plates: to CSA G40.20/G40.21.
- .2 Steel pipe: to ASTM A 53/A 53M standard weight, black.
- .3 Welding materials: to CSA W59.
- .4 Welding electrodes: to CSA W48 Series.
- .5 Bolts and anchor bolts: to ASTM A 307.
- .6 New handrails composed of steel plates welded or mechanically fastened such as indicated on plans, shop coat primer.
- .7 Aluminum threshold.
- .1 Epoxy.

2.2 FABRICATION

- .1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.

- .2 Use self-tapping shake-proof flat headed screws on items requiring assembly by screws or as indicated.
- .3 Where possible, fit and shop assemble work, ready for erection.
- .4 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

2.3 FINISHES

- .1 Galvanizing: hot dipped galvanizing with zinc coating 600g/m² to CAN/CSA-G164.
- .2 Shop coat primer: in accordance to GS-11 for chemical component.

2.4 ISOLATION COATING

- .1 Isolate aluminum from following components, by means of bituminous paint:
 - .1 Dissimilar metals except stainless steel, zinc, or white bronze of small area.

2.5 ROOF ACCESSORIES

- .1 Components used for the repair of roofs, gutters and downspouts shall be 26 gauge tinned stainless steel.
- .2 Evaporation pan on louvers: 26 gauge galvanized steel sheet.
- .3 Media filter: commercial grade filter (MERV 4) medium density made of continuous filament glass fiber . 25mm thick in roll of 65 feet.

2.6 METAL HANDRAILS

- .1 Universal access ramp: hot-dip galvanized steel handrail for tubes, sleeves and end caps. All components must be filed and rounded for a high quality finish
- .2 Staircase leading to attic: handrail in steel painted in workshop. All components must be filed and rounded for a high quality finish

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for metal fabrications installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 ERECTION

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.

- .2 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- .3 Provide suitable means of anchorage acceptable to Departmental Representative such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
- .4 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .5 Supply components for work by other trades in accordance with shop drawings and schedule.
- .6 Make field connections with bolts to CSA S16.

3.3 RAILINGS AND HANDRAILS

- .1 Install railing and handrails in locations as indicated and according to the National Building Code for lateral forces.
 - .1 Concentrated load and uniformly distributed according to article 9.8.7.7 and chart 9.8.8.2 of current NBC.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.
- .3 Waste Management: separate waste materials in accordance with Section 01 74 21- Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by metal fabrications installation.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI A208.1, Particleboard.
 - .2 ANSI A208.2, Medium Density Fibreboard (MDF).
 - .3 ANSI/HPVA HP-1, Standard for Hardwood and Decorative Plywood.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
 - .1 Architectural Woodwork Quality Standards, 1st edition, 2009.
- .3 ASTM International
 - .1 ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .2 ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .4 CSA International
 - .1 CSA B111, Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G164, Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA O121, Douglas Fir Plywood.
 - .4 CSA O141, Softwood Lumber.
 - .5 CSA O151, Canadian Softwood Plywood.
 - .6 CSA O153, Poplar Plywood.
 - .7 CAN/CSA-Z809-, Sustainable forest management.
- .5 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001, FSC Principle and Criteria for Forest Stewardship.
- .6 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .7 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber.
- .8 South Coast Air Quality Management District (SCAQMD), California State (SCAQMD)
 - .1 SCAQMD Rule 1113, Architectural Coatings.
 - .2 SCAQMD Rule 1168, Adhesives and Sealants Applications.

1.2 SUBMITTALS

- .1 Submit Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Timber Certification: submit the certificate number of the chain of custody certified FSC or SFI CAN/CSA-Z809 or wood.Co-ordinate submittal requirements and provide
- .2 Shop Drawings.
 - .1 Shop drawings submitted must be stamped and signing by a competent recognized Engineer or authorized to practice in Canada, in the province of Quebec.
 - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .3 Indicate materials, thicknesses, finishes and hardware.

1.3 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood identification: by grade mark in accordance with applicable CSA standards.
- .3 Plywood, OSB and wood based composite panel construction sheathing identification: by grademark in accordance with applicable CSA standards.

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials and equipment to site in original packaging, which must be labeled with the name and address of the manufacturer.
- .3 Storage and Handling
 - .1 Store materials and equipment so they do not rest on the floor in a clean, dry, well ventilated, in accordance with manufacturer's recommendations.
 - .2 Store millwork wood and wood products in order to protect against marks, scratches and scrapes.
 - .3 Replace materials and equipment damaged by new materials and equipment.

1.5

Part 2 Products

2.1 LUMBER MATERIAL

- .1 Light frame: : unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
 - .1 "Standard" or better grade.
 - .2 CAN/CSA-O141.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
 - .1 "Standard" or better grade.
 - .2 CAN/CSA-O141.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.
- .3 Interior railing and handrail: : unless specified otherwise, Red pine, S4S, moisture content 19% or less in accordance with following standards:
 - .1 "#1" grade without heart or sapwood.
 - .2 CAN/CSA-O86.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.

2.2 EXTERIOR LUMBER MATERIAL

- .1 Exterior railing and handrail: : unless specified otherwise, western cedar, S4S, moisture content 19% or less in accordance with following standards:
 - .1 "#1" grade without heart or sapwood.
 - .2 CAN/CSA-O86.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Clapboard: : unless specified otherwise, western cedar, S4S, moisture content 19% or less in accordance with following standards, the same profile as the existing:
 - .1 "#1" grade without heart or sapwood.
 - .2 CAN/CSA-O86.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.

2.3 PANEL MATERIALS

- .1 Canadian softwood plywood (CSP): to CSA O151, standard construction.

2.4 ACCESSORIES

- .1 Nails, screws and bolts apparent: stainless steel
- .2 Wood screws: stainless steel, type and size to suit application.
- .3 Nails, spikes and staples: to CSA B111. Stainless steel
- .4 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .5 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.
- .6 Adhesive: recommended by manufacturer.
 - .1 For splicing of wood components, set dowels wood plugs or wood inserts in bed of polyurethane adhesive.
- .7 Wood Repair Product:
 - .1 Epoxy for wood woodepox: Two component epoxy compound to replace rotted wood and fill slots in wood.

2.5 FINISHES

- .1 Stainless steel: use stainless steel 304.

Part 3 Execution

3.1 INSTALLATION

- .1 Comply with requirements of NBC 2015.
- .2 Do finish carpentry to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
- .3 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
- .4 Form joints to conceal shrinkage.
- .5 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding and other work as required.
- .6 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .7 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .8 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized steel fasteners.

- .9 Install wood backing, dressed, tapered and recessed slightly below top surface of roof insulation for roof hopper.
- .10 Install sleepers as indicated.

3.2 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Complete the handling of materials, the installation, the erection, the bracing and hoisting in accordance with the manufacturers instructions.
- .4 Fastening:
 - .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
 - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
 - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.
 - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
- .5 Standing and running trim:
 - .1 Butt and cope internal joints of baseboards to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.
 - .2 Fit backs of baseboards and casing snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.
 - .3 Make joints in baseboard, where necessary using a 45 degrees scarf type joint.
 - .4 Install door and window trim in single lengths without splicing.
- .6 Interior and exterior frames:
 - .1 Set frames with plumb sides and level heads and sills and secure.
- .7 Panelling:
 - .1 Secure panelling and perimeter trim using adhesive recommended for purpose by manufacturer. Fill nail holes caused by temporary fixing with filler matching wood in colour.
 - .2 Secure panelling and perimeter trim using concealed fasteners.
 - .3 Secure panelling and perimeter trim using counter sunk screws plugged with matching wood plugs.
- .8 Stairs:
 - .1 Install stairs to location and details as indicated.

- .9 Handrails, wall rails and bumper rails.
 - .1 Install handrails and bars and bands stop where indicated.
 - .2 Make joints hair line, dowelled and glued.
 - .3 Support brackets provided under Section for installation under this Section.
 - .4 Install metal backing plates between studs at bracket locations to ensure proper support for brackets and bolts or self-tapping screws.
 - .5 Secure using counter sunk screws plugged with matching wood plugs.

3.3 SPLICING OF WOOD COMPONENTS

- .1 Special techniques: study tool marks and methods of reproducing them.
- .2 Cut back damaged wood to a point 40 mm beyond the last evidence of decay.
- .3 Remove decayed wood with extreme care. Cause neither disruption nor damage to adjacent surfaces.
- .4 Create a cavity in to receive wood laminates.
- .5 Remove decayed wood from building site daily.
- .6 Joints:
 - .1 Lay out and cut joints to approved mock-up.
 - .2 Shape repair piece to Departmental Representative's approval.
 - .3 Trial fit joints before fastening in place. Adjust as necessary to ensure close accurate fit with adjacent surfaces.
- .7 Metal Connectors:
 - .1 Trial fit joint and metal framing connections before fastening in place. Adjust as necessary to ensure close accurate fit.
- .8 Lamination:
 - .1 Apply adhesive evenly to both surfaces and clamp to 600 kPa.
 - .2 Avoid adhesive drippings. Remove drips and splashes immediately.

3.4 CLEANING

- .1 Fastening:
 - .1 Cleaning up work: perform cleanup in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at the end of each workday
 - .2 Final Cleaning: upon completion remove materials / surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
 - .3 Waste Management: separate waste materials for reuse / reuse and recycling in accordance with Section 01 74 21 - Management and Disposal of construction / demolition.

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

3.5 PROTECTION

- .1 Protect installed products and components against damage during construction.
- .2 Repair damage to adjacent materials and equipment for the installation of millwork.

END OF SECTION

Part 1 General

1.1 REFERENCE STANDARDS

- .1 ASTM International
 - .1 ASTM C423-09a, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - .2 ASTM C518-10, Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - .3 ASTM E605-93(2011), Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members.
- .2 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102.2-10, Standard Methods for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.
 - .2 CAN/ULC-S703-09, Standard for Cellulose Fibre Insulation (CFI) for Buildings.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for [sprayed insulation - cellulose and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06- Health and Safety Requirements.
- .3 Certificates:
 - .1 Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .4 Test Reports:
 - .1 Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .5 Manufacturers' Field Reports: submit copies of manufacturers field reports, within 3 days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:

- .1 Store materials indoors, in dry location, off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Replace defective or damaged materials with new.

1.4 SITE CONDITIONS

- .1 Site Requirements:
 - .1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
 - .2 Ventilation:
 - .1 Ventilate area to receive insulation by introducing fresh air and exhausting air continuously during and 24 hours after application to maintain non-toxic, unpolluted, safe working conditions.

Part 2 Products

2.1 MATERIALS

- .1 Insulation: pure cellulose fibres, chemically impregnated to resist mould, mildew and fire, without an internal binder which does not react with base surface and adjacent materials. Applied and cured insulation to conform to following requirements:
 - .1 Cellulose fibre insulation: to CAN/ULC-S703.
 - .2 R factor: 3.60 / po min.
 - .3 Density: as per manufacturer according to ASTM E605.
 - .4 Surface burning characteristics: to CAN/ULC-S102.2.
 - .1 Flame spread: FSC 25.
 - .2 Smoke density developed: SD50.
- .2 Adhesive: as recommended by insulation manufacturer.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for sprayed insulation application in accordance with manufacturer's written instructions.
 - .1 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 PREPARATION

- .1 Protection:

- .1 Provide temporary enclosures to prevent spray from contaminating air beyond application area.
- .2 Protect adjacent surfaces and equipment from damage by over spray, fall-out, and dusting of insulation materials.

3.3 APPLICATION

- .1 Apply insulation when surfaces and ambient temperatures are within manufacturers' prescribed limits.
- .2 Apply insulation to clean dry surfaces.
- .3 Apply insulation in thickness as indicated.
- .4 Tamp smooth, surfaces visible in finished work.

3.4 FIELD QUALITY CONTROL

- .1 Manufacturers' Field Services:
 - .1 Have manufacturer of products supplied under this Section review Work involved in handling, installation/application, protection and cleaning of its product, and submit written reports in acceptable format to verify compliance of Work with Contract.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section [01 74 11- Cleaning].
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.
 - .1 Remove insulation material spilled during installation.
- .3 Waste Management: separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION

Part 1 General

1.1 RÉFÉRENCES

- .1 ASTM International
 - .1 ASTM C 919-08, Standard Practice for Use of Sealants in Acoustical Applications.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 19-GP-5M-1984, Sealing Compound, One Component, Acrylic Base, Solvent Curing (Issue of 1976 reaffirmed, incorporating Amendment No. 1)
 - .2 CAN/CGSB-19.13-M87, Sealing Compound, One-component, Elastomeric, Chemical Curing.
 - .3 CGSB 19-GP-14M-76, Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing (Reaffirmation of April 1976).
 - .4 CAN/CGSB-19.17-M90, One-Component Acrylic Emulsion Base Sealing Compound.
 - .5 CAN/CGSB-19.24-M90, Multi-component, Chemical Curing Sealing Compound.
- .3 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.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
 - .2 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.

1.2 SAMPLES

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit 2 samples of each type of material and colour.
- .3 Cured samples of exposed sealants for each colour where required to match adjacent material.

1.3 INSTALLATION CONDITIONS

- .1 Maintain materials above 5° C during installation (sealants and support).
- .2 Consult manufacturer to get instructions to apply sealants below 5° C.

1.4 QUALITY CONTROL

- .1 Submit technical brochures with product trade marks and CGSB standards to conform with data to be submitted in accordance with section 01 33 00 – Submittal Procedures.

1.5 WARRANTY

- .1 Submit to owner warranty certificate at his name stating sealant joint and other works of this section are guaranteed five (5) years against density and waterproofing losses, cracking, crumbling and staining of adjacent surfaces from date of certificate of final work completion.

Part 2 Products

2.1 MATERIALS

- .1 Primer: as recommended by manufacturer.
- .2 Back-up materials:
 - .1 General: compatible with primers and waterproofing materials, oversized 30 to 50 %.
 - .2 Polyethylene, urethane, neoprene or vinyl foam: extruded closed cell, shore A, hardness 20, tensile strength 140 to 200 kPa.
 - .3 Neoprene or butyl rubber: round solid core, shore A hardness 70.
 - .4 Polyvinyl chloride (PVC) or neoprene: extruded tube 6 mm thick (minimum).
- .3 Bond breaker tape: plastic tape, hand pressure adhesive which will not bond to sealant.
- .4 For inside and outside uses around openings such as false window frames, doors and others: pressurized urethane foam, two (2) parts, for sprayed and hose application.
- .5 Colour at Ministry Representative choice.
- .6 Joint cleaner: xylol, nethylethylcetone or non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.
- .7 Polyvinyl chloride (PVC) or neoprene: extruded tube, 6 mm thick (minimum).

2.2 SEALER PRODUCTS

- .1 Sealants acceptable for use on this project except CAN/CGSB-19.1 and CAN/CGSB-19.18 must be listed on CGSB Qualified Products List issued by CGSB Qualification Board for Joint Sealants. Where sealants are qualified with primers, use only these primers.
- .2 Where sealants are qualified with primers, use only these primers.
- .3 Glazing included in doors and storm windows: self-adhesive sealer mastic for painting, one (1) component.
- .4 Weatherstripping: Silicone flange for traditional door and window, inserted into wood frame of appropriate size.

2.3 PADS SPACING

- .1 Polyethylene pads 19mm diameter by 6mm thick.

Part 3 Execution

3.1 PREPARATION OF JOINT SURFACES

- .1 Remove dust, paint, loose mortar and other foreign materials and dry joint surfaces.
- .2 Remove rust, calamine and other deposits on steel surfaces with metal brush, grinder or sand blast.
- .3 Remove oil, grease patch and other deposits on steel surfaces with specified joint cleaner.
- .4 Prepare concrete, masonry, glazing surfaces as recommended by sealer manufacturer.
- .5 Check joint dimensions and make all necessary corrections so that joint depth will be equal to half its width ranging between minimum 6 mm deep and wide, and maximum 25 mm wide.
- .6 Install permanent back-up joint to obtain specified depth for filling product.
- .7 Prior to apply primer and sealer, mask adjacent surfaces to avoid staining.
- .8 Install non-sticking tape as recommended by manufacturer.
- .9 Apply primer on joint lateral faces immediately prior to install sealer.

3.2 APPLICATION

- .1 Apply primer, back-up joint, non-adhesive tape in accordance with manufacturer's instructions. Apply sealer with gun having appropriate nozzle dimensions. Feeding pressure to be strength enough to fill completely cavities and joints. Superficial skin caulking is not allowed.
- .2 Form sealant joint with continuous and full bead without ridges, folds, wrinkles, sags, air pockets and embedded impurities. Form concave joint.
- .3 Apply sealant to fill joints between door and window frames and adjacent building components, around each exterior opening, in recessed masonry joints and at indicated locations.
- .4 Fill with sprayed pressure polyurethane foam all free spaces around door and window frames after having waterproof exterior perimeter. Foam pressure should be enough to completely fill cavities without generating too much pressure on frames to avoid damaging their operation.
- .5 Clean without delay adjacent surfaces and leave work in perfect condition. Remove excess compound promptly from adjacent surfaces with cleaner recommended by manufacturer. Remove hide-tape after forming joint.
- .6 Ensure joint surfaces are dry and frost free.

3.3 SELF-LEVELLING SEALANT

- .1 Insure surfaces to apply sealant on are solid, clean and dry. Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease and other matters which may impair bonding.
- .2 Apply breaking-adhesion tape or roll at joint base to prevent three (3) sides bonding.
- .3 Prime sides of joints in accordance with sealant manufacturer's instructions.

- .4 Do sealant application between 5° C and 38° C.
- .5 Clean adjacent surfaces with specified cleaner recommended by manufacturer.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Clean adjacent surfaces immediately.
 - .3 Remove excess and droppings, using recommended cleaners as work progresses.
 - .4 Remove masking tape after initial set of sealant.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by joint sealants installation.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Except contrary indication, build-up the new wooden window in accordance with the requirements of ACNOR 0132.1-M1977 standard.

1.2 WORK SCOPE

- .1 Contractor shall provide
 - .1 Re-painting of all windows and storm window.
 - .2 Stripping of all surfaces with cracks.
 - .3 Re-painting in accordance with the requirements of section 09 91 61 –Historic Exterior Re-painting.
 - .4 Complete removal of existing sealing and their replacement in accordance with the requirements of section 07 92 00 and as indicated on plans.
 - .5 Replacement of shelves as indicated on plans.
 - .6 Replacement of frame or frame section as indicated on plans.

1.3 SHOP INSPECTION

- .1 Departmental representative can do periodical inspection at window manufacturer's shop and at any other places where window repair works are executed to examine and check material and fabrication quality.
- .2 Departmental Representative inspection and method of checking quality cannot be blamed for delay intended to be claimed for by Contractor and/or sub.

1.4 TECHNICAL DATA

- .1 Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
 - .1 Technical data of wood protection.
 - .2 Technical data of sealant.
 - .3 Technical data of caulking.

1.5 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Shop drawings must clearly indicate construction details, dimensions for each type of windows, various types of joints, glazing and sealant, caulking finishes and all other appropriate data.

1.6 PRODUCT SAMPLE

- .1 Provide following samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 One sample of each wood species to be used dimensions 38 mm x 100 mm x 600 mm.
 - .2 One (1) section of each wood window profile, length 300 mm.

- .3 Each type of nail and screw.
- .4 Any other sample of specified products required by Departmental Representative.
- .2 Submit samples and get approval prior to fabricate the following prototype.

1.7 WARRANTY

- .1 Contractor certify that new and repaired wood windows are guaranteed against air leakage, material and installation defects for a five (5) years period beginning the date of final work acceptance by Departmental Representative.
- .2 Following lacks will be considered as defects:
 - .1 Water infiltration through walls or inside the building caused by defective window joints.
 - .2 Glaze breaking resulting from fabrication and/or installation defects, weather exposure.
 - .3 Any abnormal defects caused by inadequate handling.
- .3 Warranty includes cost of all expenses caused by defect repairs and damages to adjacent works following window defects.
- .4 Warranty certificate to be submitted and approved by Departmental Representative before allowing sub-contract for works of this section.

Part 2 Products

2.1 MATERIALS

- .1 Wood for new storm-windows : west cedar, selected grade Premium n° 1, clear of knots, straight grain free from sapwood cracks, splits and other defects harmful to wood quality, kiln dry maximum 12 % humidity content; species and quality as follows :
 - .1 Humidity level in accordance with wood classification rules of Canadian Lumberman's Association.
- .2 Wood adhesive: waterproof in accordance with ACNOR 0132.1-M1977.
- .3 Mounting: finishing nails galvanized steel suitable length according to CSA B111-1974, galvanized steel screw with countersunk head suitable length.
- .4 Storm-windows Hardware: tradition of wood lumber such existing and/or reproduction.
- .5 Caulking : refer to section 07 92 00.<
- .6 Wood Repair Product:
 - .1 Epoxy for wood woodepox: Two component epoxy compound to replace rotted wood and fill slots in wood.
- .7 Weatherstripping: Silicone flange for traditional door and window, inserted into wood frame of appropriate size.
- .8 Plastic mesh fastened under storm windows: Black nylon mesh for cedar shingles roof.

2.2 FABRICATION

- .1 New wood : plane on four (4) faces in accordance with profiles and dimensions indicated in shop drawings. Indicated dimensions are finished dimensions after planing.
- .2 Shape wood with modern machinery and tooling. Exposed wood faces to be free from roughness, warping and machinery marks. Moulding profiles to be clean cut, sharp and free from curbs.
- .3 Various wood components including moulding to be supplied straight, free from cracks, splits and other defects.
- .4 Foresee and install various parts so they can contract or expand while staying waterproof when used outside. Reinforce components where required and fasten them so they can resist to efforts and strengths without damage.
- .5 Glue all assembly wood with pressure press.
- .6 Use pegs in addition to glue to fasten wood components where splicing are required for partial replacement of members.
- .7 Fabricate new window and storm-window in shop so they are ready to install in opening with their frame.
- .8 Fabricate members as required following individual dimension survey of each window and shutter.
- .9 Fabricate new frames and doors with accurate dimensions, with no more than 1.6 mm for 2 meters or less measured in a diagonal way across frames and doors.
- .10 Repair existing windows and shutters and fabricate new ones so that mobile casements can be opened with a maximum effort of 2,5 kg.
- .11 Repair and/or replace arched lintel with solid wood as required profile and shape following reknown and tested methods. Note that centring may vary for each opening.
- .12 Repair and/or replace window sills and lintels and adjust them to existing openings following sloped angle of recessed windows.

2.3 WOOD MEMBERS FOR REPLACEMENT

- .1 Prepare in shop all wood members for replacement at required dimensions and profiles surveyed on site so they exactly fit in existing openings and casements.

2.4 MODIFICATIONS TO EXISTING FRAMES

- .1 Replace lower transoms if necessary in accordance with approved prototype. Do not damage stiles.

Part 3 Execution

3.1 WINDOW AND STORM WINDOWS REPAIR

- .1 Proceed as approved prototypes by Departmental Representative.
- .2 Replace all defective members compromising storm window and window airtightness, waterproofness, solidity and durability.

3.2 REPLACEMENT OF WINDOWS AND STORM WINDOWS

- .1 Remove all storm windows with taking care to number each part.
- .2 Fabricate new storm windows in the locations shown in the plans.
- .3 Install new storm window or those repaired to their original location. Adjust the existing parties remained in place.

.4 GLAZING SEALANT

- .1 Work includes removal of old mastic and application of new sealant as well as re-installation of new galvanized fixing triangles.
- .2 Apply new sealant to all glazing on existing or new windows in accordance with section 07 92 00. This sealant will be painted once cure is complete, take care to cover the glass with paint about 1mm at perimeter.

.5 GLAZING

- .1 Replace all broken glazing after beginning contract at Contractor's expenses.

END OF SECTION

Part 1 General

1.1 SECTIONS INCLUDES

- .1 Moisture testing of substrates.
- .2 Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking and making good surfaces and areas to limits defined under MPI Repainting Maintenance Manual requirements.
- .3 Specific pre-treatments noted herein or specified in the MPI Repainting Maintenance Manual.
- .4 Sealing/touch-up, spot priming, and/or full priming surfaces for repainting in accordance with MPI Repainting Maintenance Manual requirements.

1.2 REFERENCE

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .2 The Master Painters Institute (MPI)
 - .1 Maintenance Repainting Manual by the Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List
- .3 National Fire Code of Canada.
- .4 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coating) of the Environmental Protection Agency (EPA).

1.3 INTERPRETATION

- .1 The words and expressions paint, painting and repainting include surface treatment with the help of products such as primers or printing products, paints, coatings, varnishes, stains, lacquers and others included in the list of the MPI Painting Specification Manual.

1.4 QUALITY ASSURANCE

- .1 Conform to latest MPI requirements for exterior repainting work including cleaning, preparation and priming.
- .2 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) shall be in accordance with the latest edition of the MPI Approved Product List and shall be from a single manufacturer for each system used.
- .3 Paint materials such as linseed oil, shellac, turpentine, etc. shall be the highest quality product of an approved manufacturer listed in MPI Maintenance Repainting Manual and shall be compatible with other coating materials as required.
- .4 Retain purchase orders, invoices and other documents to prove conformance with noted MPI requirements when requested by the Departmental Representative.

- .5 Mock-ups:
 - .1 Provide a mock-up in accordance with requirements of Section 01 45 00 - Quality Control to Departmental Representative.
 - .2 Prepare and repaint mock-up designated exterior surface or item to requirements specified herein, with specified paint or coating showing selected colours, number of coats, gloss/sheen, textures and workmanship to MPI Maintenance Repainting Manual standards for review and approval.
 - .3 When approved, repainted surface and/or item shall become acceptable standard of finish quality and workmanship for similar on-site exterior repainting work.
- .6 Standard of Acceptance: When viewed using natural prevailing sunlight at peak period of the mid-day on surface viewed, surfaces shall indicate the following:
 - .1 Walls: No defects visible from a distance of 1000 mm at 60° to surface.
 - .2 Soffits: No defects visible from grade at 45° to surface.
 - .3 Final coat to exhibit uniformity of colour and sheen across full surface area.

1.5 ENVIRONMENTAL PERFORMANCE REQUIREMENTS

- .1 Provide paint products meeting MPI "Environmentally Friendly" ratings based on VOC (EPA Method 24) content levels.

1.6 INSPECTION REQUIREMENTS

- .1 Exterior surfaces requiring repainting shall be inspected by both painting contractor and Paint Inspection Agency who shall notify the Departmental Representative in writing of defects or problems, prior to commencing repainting work, or after surface preparation if unseen substrate damage is discovered.
- .2 Where an assessed degree of surface degradation of DSD-1 to DSD-3 before preparation of surfaces for repainting is revealed to be DSD-4 after preparation, repair or replacement of such unforeseen defects discovered shall be rectified by others, as mutually agreed, before repainting is started.

1.7 SCHEDULING OF WORK

- .1 Submit work schedule for various stages of painting to the Departmental Representative for approval. Submit schedule a minimum of 48 hours in advance of proposed operations.
- .2 Paint occupied facilities in accordance with approved schedule. Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.
- .3 Obtain written authorization from the Departmental Representative for changes in work schedule.
- .4 Schedule repainting operations to prevent disruption by other trades if applicable and by occupants in and about the building.

1.8 SUBMITTALS

- .1 Submittals shall be in accordance with the requirements of Section 01 33 00 - Submittal procedures.
 - .1 Submit full range colour sample chips for review and selection. Indicate where colour availability is restricted.
- .2 Submit product data and manufacturer's installation/application instructions for paints and coating products to be used.
- .3 Submit WHMIS Material Safety Data Sheets (MSDS).
- .4 Quality Assurance Submittals:
 - .1 Manufacturer's Instructions: manufacturer's installation instructions.
- .5 Upon completion, submit records of products used. List products in relation to finish system and include the following:
 - .1 Product name, type and use (i.e. materials and location).
 - .2 Manufacturer's product number.
 - .3 Colours' code number.
 - .4 MPI Environmentally Friendly classification system rating.
 - .5 Manufacturer's Material Safety Data Sheets.

1.9 QUALITY CONTROL

- .1 Provide a mock-up to the Departmental Representative.
- .2 Prepare and repaint mock-up designated exterior surface or item to requirements specified herein, with specified paint or coating showing selected colours, gloss/sheen, textures and workmanship to MPI Maintenance Repainting Manual standards for review and approval.
- .3 When approved, repainted surface and/or item shall become acceptable standard of finish quality and workmanship for similar on-site exterior repainting work.

1.10 EXTRA MATERIAL

- .1 Submit maintenance materials as required.
- .2 Submit one four liters can of each type and color of finish coating. Identify type and color in relation to established color schedule and finish system.
- .3 Deliver and store where directed by the Departmental Representative.

1.11 DELIVERY, HANDLING AND STORAGE

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common product requirements.
 - .1 Deliver and store materials in original containers, sealed, with labels intact.
 - .2 Labels shall clearly indicate :
 - .1 Manufacturer's name and address.
 - .2 Type of paint or coating.

- .3 Compliance with applicable standard.
 - .4 Colour number in accordance with established colour schedule.
- .3 Remove damaged, opened and rejected materials from site.
- .4 Store and handle in accordance with manufacturer's recommendations.
- .5 Store materials and equipment in secure, dry, well-ventilated area with temperature range between 7 degrees C to 30 degrees C. Store materials and supplies away from heat generating devices and sensitive products above minimum temperature as recommended by manufacturer.
- .6 Keep areas used for storage, cleaning and preparation, clean and orderly to approval of Departmental Representative. Upon completion of operations, return areas to clean condition to approval of Departmental Representative.
- .7 Remove paint materials from storage in quantities required for same day use.
- .8 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.
- .9 Fire Safety requirements :
 - .1 Provide two (2) 9 kg dry chemical fire extinguisher adjacent to storage area.
 - .2 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site daily.
 - .3 Handle, store, use and dispose of flammable and combustible materials in accordance with National Fire Code of Canada.
- .2 Waste Management and Disposal:
 - .1 Paint, stain and wood preservative finishes and related materials are hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from Provincial Ministries of Environment and Regional levels of Government.
 - .2 Materials that cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.
 - .3 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.
 - .4 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground the following procedures shall be strictly adhered to:
 - .1 Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
 - .2 Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
 - .3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.

- .4 Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
- .5 Empty paint cans are to be dry prior to disposal or recycling (where available).
- .6 Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.
- .7 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.

1.12 SITE REQUIREMENTS

- .1 Temperature, Humidity and Substrate Moisture Content Levels:
 - .1 Under the specific conditions set out below, refurbishment of exterior paint coatings shall not be carried out without prior approval by the contracting authority responsible for the design, the inspection body for the paintwork and by the manufacturer of the applied product.
 - .2 Do not perform repainting work when:
 - .1 Ambient air and substrate temperatures are below 10°C.
 - .2 Substrate temperature is over 32°C unless paint is specifically formulated for application at high temperatures.
 - .3 Substrate and ambient air temperatures are expected to fall outside paint manufacturer's prescribed limits.
 - .4 Relative humidity is above 85% or when dew point is less than 3°C variance between air/surface temperature.
 - .5 Rain or snow is forecast to occur before paint has thoroughly cured.
 - .6 It is foggy, misty, raining or snowing at site.
 - .3 With a properly calibrated electronic moisture meter, perform tests to determine the moisture content of substrates, except for concrete floors already painted with moisture content to be assessed by simple Control of covering power "at the points where failures have been identified.
 - .4 Do not perform repainting work when maximum moisture content of substrate exceeds: 15% for wood.
- .2 Application Requirements:
 - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind conditions are such that airborne particles will affect quality of finished surface.
 - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits noted herein.
 - .3 Apply paint when previous coat of paint is dry or adequately cured, unless otherwise pre-approved by specific coating manufacturer.
 - .4 Apply paint finishes when conditions forecast for entire period of application fall within manufacturer's recommendations.
 - .5 Do not apply paint when:

- .1 Temperature is expected to drop below 10°C before paint has thoroughly cured.
- .2 Substrate and ambient air temperatures are expected or paint manufacturer's limits.
- .3 Surface to be painted is wet, damp or frosted.
- .6 Provide and maintain cover when paint must be applied in damp or cold weather. Heat substrates and surrounding air to comply with temperature and humidity conditions specified by manufacturer. Protect until paint is dry or until weather conditions are suitable.
- .7 Schedule repainting operations such that surfaces exposed to direct, intense sunlight are scheduled for completion during early morning.
- .8 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.

1.13 DUST COVERS

- .1 Plan on having insulated dust covers to close off dust creating spaces to protect workers, the public and surfaces and areas where the work has already been completed.
- .2 Keep dust covers and move them as required until all activities are completed.

Part 2 Products

2.1 MATERIALS

- .1 Paint materials listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project.
- .2 Paint materials for repaint systems shall be products of a single manufacturer.

2.2 COLORS

- .1 Departmental Representative will provide the list of colors after contract award.
- .2 The list of colors will be determined based on the colors found on site.
- .3 The colors are chosen from the full range of colors and shades offered by manufacturers.
- .4 If specific products are offered in a limited range of colors, the colors of the products actually implemented will be selected in this narrow range.

2.3 MIXING AND TINTING

- .1 Perform color tinting operations prior to delivery of paint to site. On-site tinting of painting materials is allowed with the Departmental Representative's written permission.
- .2 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.

2.4 GLOSS/SHEEN RATINGS

- .1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with the following MPI gloss/sheen standard values:

Gloss Level Category	Units @ 60°	Units @ 85°
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G1 - matte finish	0 to 5	maximum 10
G2 - velvet finish	0 to 10	10 to 35
G3 - eggshell finish	10 to 25	10 to 35
G4 - satin finish	20 to 35	minimum 35
G5 - semi-gloss finish	35 to 70	
G6 - gloss finish	70 to 85	
G7 - high gloss finish	> 85	

- .2 Gloss level ratings of repainted surfaces shall be as specified herein and as noted on Finish Schedule.

2.5 EXTERIOR PAINTING SYSTEMS

- .1 Wood
- .1 Healthy wood laid bare:
- .1 Primer exterior Alkyd mildew resistant. One (1) layer.
- .2 Painting exterior latex mildew resistant semi-gloss finish. Two (2) layers.
- .2 Primed or painted wood:
- .1 Painting exterior latex mildew resistant semi-gloss finish. Two (2) layers.
- .2 Metal
- .1 Metal exposed and/or rusty
- .1 Primer Alkyd Rust. One (1) layer.
- .2 Enamel alkyd gloss finish. Two (2) layers.
- .2 Metal primed or painted
- .1 Enamel alkyd gloss finish. Two (2) layers.
- .3 Outside access ramp and porch
- .1 Floors, stairs, stringers:
- .1 opaque dye gray as the existing (DEK Rubbol "Sikkens"). Two (2) layers.
- .2 Columns, columns, handrails, balusters, moldings, decorations and board face:
- .1 White opaque stain as existing (DEK Rubbol "Sikkens"). Two (2) layers.
- .4 Woodwork doors and windows
- .1 Wood healthy exposed:
- .1 Primer Alkyd. One (1) layer.
- .2 Painting exterior latex semi-gloss finish. Two (2) layers.
- .2 Wood primed or painted:
- .1 Painting exterior latex semi-gloss finish. Two (2) layers.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 EXAMINATION

- .1 Exterior surfaces requiring repainting: inspected by both painting contractor and Departmental Representative in writing of defects or problems, prior to commencing repainting work, or after surface preparation if unseen substrate damage is discovered.

3.3 CLEANING AND PREPARATION

- .1 Clean and prepare exterior surfaces to be repainted in accordance with MPI Maintenance Repainting Manual requirements.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.
- .3 Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 The surface must be clean, free from dirt and oil stains. Seal knots and sap streaks with POLYPREP shellac 205-112, or approved equivalent by the Departmental Representative, after burning or scraping resin exudations. Sand rough spots. Fill holes and cracks with putty after the primer coat has dried. Wood treated with a preservative must be free from all traces of solvent.
 - .2 Remove dust, dirt, and surface debris by brushing, wiping with dry, clean cloths or compressed air.
 - .3 Wash surfaces with a biodegradable detergent (and bleach where applicable) and clean warm water using a stiff bristle brush to remove dirt, oil and surface contaminants.
 - .4 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
 - .5 Use trigger operated spray nozzles for water hoses.
 - .6 Allow surfaces to drain completely and to dry thoroughly.
 - .7 Use water-based cleaners in place of organic solvents where surfaces will be repainted using water based paints.
 - .8 Many water-based paints cannot be removed with water once dried. However, minimize the use of kerosene or such organic solvents to clean up water-based paints.
- .4 Where required, pressure wash exterior surfaces prior to repainting in accordance with MPI standards for type of surfaces and recommended pressures to ensure complete removal of loose paint, stains, dirt, and foreign matter. This work to be carried out by qualified tradesman experienced in pressure water cleaning. Use of spray equipment such as water hose cleaning will not be considered satisfactory unless specified herein. Allow sufficient drying time and test surfaces using an electronic moisture meter before commencing work.

- .5 Clean metal surfaces to be repainted by removing rust, dirt, oil, grease and foreign substances in accordance with MPI requirements. Remove such contaminants from surfaces, pockets and corners to be repainted by brushing with clean brushes, blowing with clean dry compressed air, or brushing/vacuum cleaning as required.
- .6 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before priming and between applications of remaining coats. Touch-up, spot prime, and apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .7 Do not apply paint until prepared surfaces have been accepted by the Departmental Representative.
- .8 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects from previously painting (e.g. runs, sags, etc.) that are visible from a distance up to 1000 mm.
- .9 Rusted nails treatment:
 - .1 Remove by sanding all rust stained paint down to the nail head.
 - .2 Sand the nail head to remove accumulated rust.
 - .3 Countersink the nail.
 - .4 Apply a coat of primer and a coat of exterior wood filler.
 - .5 Paint

3.4 EXISTING CONDITIONS

- .1 Prior to commencing work, thoroughly examine site conditions and existing exterior substrates to be repainted and report in writing to the Departmental Representative damages, defects, unsatisfactory or unfavorable conditions of surfaces that will adversely affect this work.
- .2 Conduct moisture testing of surfaces to be painted using a properly calibrated electronic moisture meter. Report findings to the Departmental Representative. Maximum moisture content shall not exceed 12%.
- .3 No repainting work shall commence until such adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Painting Subcontractor and Inspection Agency. Commencement of work shall not be held to imply acceptance of surfaces except as qualified herein.
- .4 Degree of surface deterioration (DSD) shall be assessed using MPI Identifiers and Assessment criteria indicated in the MPI Maintenance Repainting Manual. MPI DSD ratings and descriptions are as follows:

DSD-0Sound Surface (includes visual (aesthetic) defects that do not affect film's protective properties).

DSD-1Slightly Deteriorated Surface (indicating fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.).

DSD-2Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).

DSD-3 Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).

DSD-4 Substrate Damage (repair or replacement of surface required by others).

3.5 PROTECTION

- .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by the Departmental Representative.
- .2 Protect items that are permanently attached such as Fire Labels on doors and frames.
- .3 Protect factory finished products and equipment.
- .4 Protect general public and building occupants in and about the building.
- .5 Removal of light fixtures, surface hardware on doors, and surface mounted equipment, fittings and fastenings shall be done prior to undertaking painting operations by General Contractor. Items shall be securely stored and re-installed after painting is completed by General Contractor.
- .6 Move and cover exterior furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.
- .7 As painting operations progress, place "WET PAINT" signs in pedestrian and vehicle traffic areas to approval of the Departmental Representative.

3.6 APPLICATION

- .1 Apply paint by method that is best suited for substrate being repainted Conform to manufacturer's application instructions unless specified otherwise. In each case the method of application shall be as pre-approved by the Departmental Representative before commencing work.
- .2 Roller Application:
 - .1 Apply paint in a uniform layer using roller of types suitable for application.
 - .2 Work paint into cracks, crevices and corners.
 - .3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers or sheepskins.
 - .4 Brush and/or roll out runs and sags, and over-lap marks.
 - .5 Remove runs, sags and brush marks from finished work and repaint.
- .3 Spray Application:
 - .1 Keep paint ingredients properly mixed in containers during paint application either by intermittent agitation as frequently necessary.
 - .2 Apply paint in a uniform layer, with overlapping at edges of spray pattern.
- .4 Use dipping, sheepskins or daubers when no other method is practical in places of difficult access and when specifically authorized by the Departmental Representative.

- .5 Apply paint coats in a continuous manner and allow surfaces to dry and properly cure between coats for minimum time period as recommended by manufacturer. Minimum dry film thickness of coats shall not be less than that recommended by the manufacturer. Repaint thin spots or bare areas before next coat of paint is applied.
- .6 Sand and dust between coats to remove visible defects.
- .7 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as projecting ledges.
- .8 Finish to doors shall include all edges including top and bottom edges. Surfaces concealed by door hardware shall also be repainted unless otherwise pre-approved.

3.7 FIELD QUALITY CONTROL

- .1 Advise the Departmental Representative and Paint Inspection Agency when each surface and applied coating is ready for inspection. Do not proceed with subsequent coats until previous coat has been approved.
- .2 Co-operate with the Paint Inspection Agency and provide access to areas of work.

3.8 CLEAN-UP

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Remove paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .3 Keep work area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.
- .4 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .5 Clean equipment and dispose of wash water used for water borne materials, solvents used for oil based materials as well as cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, paint removers / strippers in accordance with the safety requirements of authorities having jurisdiction and as noted herein.
- .6 Painting equipment shall be cleaned in leak-proof containers that will permit particulate matter to settle out and be collected. Sediment remaining from cleaning operations shall be recycled in a manner acceptable to authorities having jurisdiction.

3.9 RESTORATION

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.
- .3 Remove paint splashings on affected exposed surfaces. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .4 Protect freshly completed surfaces from paint droppings and dust to approval of the Departmental Representative. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by the Departmental Representative.

END OF SECTION