



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

Travaux publics et Services gouvernementaux  
Canada  
Place Bonaventure, portail Sud-Oue  
800, rue de La Gauchetière Ouest  
7e étage, suite 7300  
Montréal  
Québec  
H5A 1L6  
FAX pour soumissions: (514) 496-3822

**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**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, portail Sud-Oue  
800, rue de La Gauchetière Ouest  
7e étage, suite 7300  
Montréal  
Québec  
H5A 1L6

<b>Title - Sujet</b> UPS System Installation	
<b>Solicitation No. - N° de l'invitation</b> EF944-191801/A	<b>Amendment No. - N° modif.</b> 003
<b>Client Reference No. - N° de référence du client</b> R.094477.001	<b>Date</b> 2018-11-16
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$MTC-560-15079	
<b>File No. - N° de dossier</b> MTC-8-41214 (560)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2018-11-22</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ghali, Camille	<b>Buyer Id - Id de l'acheteur</b> mtc560
<b>Telephone No. - N° de téléphone</b> (514) 607-2190 ( )	<b>FAX No. - N° de FAX</b> (514) 496-3822
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

## **AMENDMENT No. 3**

This amendment aims to answer some questions received during the call for tender and to include Addendum No.2.

**- All other terms and conditions remain unchanged –**

<b>Addendum no. :</b>	<b>ME-02e</b>	<b>Project :</b>	<b>New UPS and Electrical room</b>
<b>Discipline :</b>	Mechanical / Electrical / Architectural		
<b>WSP file:</b>	181-03430-01	<b>Title :</b>	Various Modifications
<b>Date :</b>	2018-11-16	<b>Client :</b>	Public Works and Government Services Canada
<b>Document(s) annex(es) :</b>	No <input type="checkbox"/> Yes <input checked="" type="checkbox"/>		
<b>Qty : 1</b>	Sketch/Plans : 2		

## 1. GENERAL

The present addendum is an integral part of the tender documents and must be read conjointly with the contractual documents.

## 2. OBJECTIVE

The intent of this addenda is to inform tenderers of additions or changes to tender documents.

## 3. ADDITIONAL INFORMATIONS

All bidders must read the clarifications, additions or modifications indicated in this addendum.

## SIGNATURES



Mechanical engineer

**DESCRIPTIONS :**

The following description presents the main changes. The Bidder should review the attached plans for any changes identified by revision clouds.

- 1                   **General**
- 1.1                Modification to specifications
- .1            Section 00 01 10 is replaced
- 2                   **Mechanical**
- 2.1                Modification to specifications
- .1            21 44 16, 2.1.2 is removed
- .2            23 05 00, 2.2.2 is removed
- .3            23 05 00, 2.3.1.2 is removed
- .4            23 05 17 3.4.3 should read Ministerial representative instead of MDN
- .5            23 05 29, 2.4.4 is removed
- .6            23 05 29 2.5.1.3 is removed
- .7            23 05 29 2.5.2.3 is remove
- .8            23 05 29 2.6.1.6 is remove
- .9            23 05 29 2.6.2.7 is remove
- .10           23 05 53 2.4.7.3 is remove
- .11           23 05 53 3.6.1 should read with tape, 12 mm long with lettering
- .12           23 05 53 3.7.1 should read with insulation 25 mm thick
- .13           23 21 13.01 2.4 does not apply to regulation valve the title becomes ball valves
- .14           23 21 13.01 2.4.1.3 is removed
- .15           23 21 13.02 2.4.1.2 is removed
- .16           23 21 13.02 2.5 does not apply to regulation valve the title becomes ball valves 23 21 13.02 2.5.1.3 is remove
- .17           23 21 13.02 2.6.1.3 is removed
- .18           23 21 13.02 2.7.1.2.3 is removed
- .19           23 21 13.02 2.7.2.2.3 is removed
- .20           23 21 13.02 2.8.2 is removed
- .21           23 21 13.02 2.9.2 is removed
- .22           23 21 13.02 2.10.5 is removed
- .23           23 21 13.02 2.11.2 should read temperatures and joints
- .24           23 21 13.02 2.11.7 is removed
- .25           23 21 13.02 2.12.2 is removed
- .26           23 21 14 2.1.1.1 is removed

- .27 23 21 14 2.2.2.1 is removed
- .28 23 33 16 2.1.2.13 is removed
- .29 23 37 13 2.4.6 is removed
- .30 23 81 40 2.5.2.1, .2 et is removed
- .31 25 00 00 2.4.2 is removed
- .32 25 00 00 2.5.4 is removed
- .33 25 00 00 2.7.2.1.1.6 is removed
- .34 25 00 00 2.7.2.1.2.5 is removed
- .35 25 00 00 2.7.2.1.3.6 is removed
- .36 25 00 00 2.7.2.2.6 is removed
- .37 25 00 00 2.7.2.3.4 is removed
- .38 25 00 00 2.7.2.4.5 is removed
- .39 25 00 00 2.7.2.7.8 is removed
- .40 25 00 00 2.7.2.8.2 is removed
- .41 25 00 00 2.7.2.9.4 is removed
- .42 25 00 00 2.7.2.10.2 is removed
- .43 25 00 00 2.8.1.4 is removed
- .44 25 01 11 1.5.2 read 'inform the ministerial representative
- .45 25 01 11 1.5.3 read 'in the presence of ministerial representative
- .46 25 01 11 3.3.1 read "satisfaction of ministerial representative
- .47 25 01 12 1.2.2 read 'submit to ministerial representative
- .48 25 01 12 1.3.2 read 'the ministerial representative
- .49 25 05 01 1.6.7 is removed

Architectural

2.2 Modification to Drawings

- .1 On drawing A01/02 the following additional information is provided:
  - 1.1 In the general notes, all dimensions (materials and dimensions) are in metric scale.
  - 1.2 All graphic references (symbols, hierarchy of line weights) are to be made as legible as possible.
  - 1.3 The fire proofing coating is described in section 07 81 00 of the specification book with the index of propagation clearly indicated. The cementitious coating is to cover all structural components in the ceiling as well as any exposed mechanical conduits located on the upper part of UPS.
  - 1.4 In the general notes, notes 12 and 13 have been modified.
  - 1.5 The description of the baseboard detail #01 and the one described in the specifications is to be a cove base.
  - 1.6 Application of an epoxy base sealant is required on all surfaces, both horizontal and vertical of housekeeping pads.
  - 1.7 Detail #10 shows the dimensions of the ventilation grille required by mechanical.
  - 1.8 Detail 01 indicates the location of the existing baseboards to be removed.
  - 1.9 The installer must validate with Project Manager to ensure that proposed manufacturers are compatible with client standards. The description of the hardware

group have been modified. Please refer to hardware group table. The installer must obtain keying system from client.

The new door shall have 45 mm in thickness.

1.9 In the general notes, notes 14, 15 and 16 have been added

.2 On the drawing A02/02 the following additional information is provided:

2.1 Several annotations have been modified for clarification purposes.

2.2 The installation detail for the lintel of the new door (detail #5) allows for the installation of a metal frame similar to existing ones. Esthetic continuity with existing masonry of the corridor must be ensured.

2.3 Modification to specifications

.1 Section 02 41 99

.1 Eliminate 1.3.1

.2 Section 07 81 00 is added

.3 Section 08 11 00

.1 Replace 2.5.1 with:

**Field paint steel doors and frames in accordance with Section 09 91 23- Interior Painting. Door hardware must be free of paint. Provide final finish free of scratches or other imperfections.**

.4 Section 08 71 00 is added

.5 Section 09 65 19

.1 Replace 2.1 with:

**Anti-Static Vinyl Tiles: to conform to ASTM F1700, Class 1 printed pattern, type A, asbestos-free composition, smooth surface, homogeneous, 3.2 mm thick and 305 x 305 mm. Indicated as CV1 tiles in the drawings.**

**These tiles must conduct electricity either in the conductive domain (CVT) or in the dissipative domain (SDT).**

**Complies with EOS / EDS 7.1S (ASTM-F150).**

**Floorscore certified gray color.**

**Acceptable products:**

**Electrotile from American Brite, low gloss gray color**

**Colorex EC by Forbo, quartz color**

**Flexible baseboards: continuous, supported on the floor covering, with pre-molded end pieces and protruding corners, in accordance with the requirements of ASTM F1861, Type TP, Group 1.**

**Type CA1: thermoplastic rubber;**

**Model : grooved**

**Thickness : 3.17 mm;**

**Height :**

**CA1 : 102 mm or 76mm;**

Length : in roll of 30.48 m;

Colours: matching the adjacent tiles.

**Transition**

To be in rubber or vinyl, smooth, with flat extending under the floor covering on one side and flush to the top of adjoining covering. Color to match adjacent floor covering and having a maximum length of 25 mm.

**Primer and adhesives:** Use products recommended by the manufacturer and specifically designed for conductive vinyl or dissipative flooring or for vinyl or rubber baseboards.

.6 Section 09 91 23

.1 Replace 2.2.2.1 with :

**Color P1 : Among others for ceilings, walls, doors and mechanical equipment and conduits: As per existing.**

.2 Replace 2.2.2.2 with:

**Color P2: For doors and frames among other things: As per existing**

.3 Replace 2.2.2.3 with:

**Color P3 : As required**

.4 Replace 2.2.2.3 with:

**.1 Concrete masonry elements: Brick and smooth or split face concrete blocs.**

**.1 INT 4.2D –high performance latex architectural products, gloss level #3**

**.2 Structural steel and other metal assemblies: beams, columns (columns), joists (joists)**

**.1 INT 5.1R - High Performance Latex Architectural Product, Gloss # 2 for beams, joists, fabricated metals, piping, ductwork, conduit support, or all other steel ceiling elements**

**.3 Galvanized metal: including doors, frames, railings, miscellaneous steel components, piping, raised decks / supports and ducts.**

**.1 INT 5.3M - High performance latex architectural product, gloss level # 3 for doors, frames and glazed partitions.**

**Plaster and gypsum board: gypsum wallboard, drywall, sheet rock type material, and textured finishes: INT 9.2B - High performance latex architectural product, # 2 gloss level for ceilings and # 3 gloss level on walls.**

.5 Replace 3.3.3 with:

**.1 Drywall: 12%.**

**.2 Concrete: 12%.**

**.3 Concrete or clay blocs or brick: 12%.**

**.4 Wood: 15%.**

2.4

Technical responses

N/A

END OF ADDENDA

Section Number	Section Title	No. of Pages
<b>DIVISION 01 – GENERAL REQUIREMENTS</b>		
00 00 00	Cover page	1
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00 07 01.01	Signature page – mechanical	1
00 07 01.02	Signature page – electrical	1
01 11 00	Summary of work	4
01 33 00	Submittal procedures	4
01 33 0 R	Electrical shop drawings	2
01 35 29.06	Health and safety	3
01 56 00	Temporary barriers and enclosures	2
01 74 11	Cleaning	2
01 78 00	Closeout submittals	6
<b>DIVISION 02 – EXISTING CONDITIONS</b>		
02 41 99	Demolition - Minor works	2
<b>DIVISION 04 – MASONRY</b>		
04 04 99	Masonry for minor works	6
<b>DIVISION 06 – WOOD, PLASTIC AND COMPOSITES</b>		
06 10 00	Carpentry	4
<b>DIVISION 07 – THERMAL &amp; WATERPROOFING</b>		
07 21 16	Blanket insulation	3
07 81 00	Applied fireproofing	6
07 84 00	Fire stopping	5
07 92 00	Joint sealants	5
<b>DIVISION 08 – OPENINGS AND CLOSURES</b>		
08 11 00	Metal doors and frames	5
08 71 00	Door Hardware	4
<b>DIVISION 09 – FINISHES</b>		
09 21 16	Gypsum board assemblies	7
09 22 16	Non-structural metal framing	4
09 65 19	Resilient tile flooring	4
09 91 23	Painting - Interior painting	11
<b>DIVISION 21 – FIRE PROTECTION</b>		
21 44 16.19	Portable extinguishers	3
<b>DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING (HVAC)</b>		
23 01 31	Air duct cleaning for HVAC systems	10
23 05 00	Common work results for HVAC	6
23 05 01	Use of HVAC system during construction	2
23 05 05	Installation of pipework	6
23 05 17	Pipe welding	3
23 05 29	Hangers and supports	6
23 05 48	Vibration and seismic controls	4
23 05 53.01	Mechanical identification	6
23 05 93	Testing, adjusting and balancing for HVAC	5

23 07 13	Duct insulation	5
23 07 15	Thermal insulation for piping	4
23 21 13 01	Hydronic systems - copper	2
23 21 13 02	Hydronic systems – steel	6
23 21 14	Hydronic specialties	2
23 31 13.01	Metal ducts - low pressure to 500 pa	14
23 33 00	Air duct accessories	4
23 33 16	Dampers – fire and smoke	2
23 33 53	Duct liners	4
23 37 13	Diffusers, registers and grills	3
23 44 00	HVAC air filtration	3
23 81 40	Air and water source unitary heat pumps	4
<b>DIVISION 25 – INTEGRATED AUTOMATION</b>		
25 00 00	Controls	12
25 01 11	Start-up, verification and commissioning	6
25 01 12	EMCS training	3
25 05 01	EMCS general requirements	10
25 05 54	EMCS identification	2
<b>DIVISION 26 – ELECTRICAL</b>		
26 05 01	General requirements	13
26 05 20	Wire and box connectors (0-1000 V)	2
26 05 21	Wires and cables (0-1000 V)	4
26 05 28	Grounding - secondary	4
26 05 29	Hangers and supports for electrical systems	2
26 05 32	Outlet boxes	3
26 05 34	Conduits, conduit fastenings and conduit fittings	4
26 24 16.01	Distribution panels	3
26 24 16.02	Molded case circuit breakers	2
26 27 26	Wiring devices	3
26 28 21	Molded breaker boxes	2
26 33 53	Uninterruptible power supply	11
26 52 00	Emergency lighting	2

**END OF SECTION**

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**Part 1            General**

**1.1                RELATED SECTIONS**

- .1        Section 05 21 00 – Steel Joist Framing.
- .2        Section 05 31 00 – Steel Decking.

**1.2                REFERENCES**

- .1        American Society for Testing and Materials International, (ASTM)
  - .1        ASTM E605-93(2011), Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members.
  - .2        ASTM E736-00(2011), Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
  - .3        ASTM E759-92(2011), Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members.
  - .4        ASTM E761-92(2011), Standard Test Method for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members
  - .5        ASTM E859-93(2011), Standard Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members.
- .2        Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1        Material Safety Data Sheets (MSDS).
- .3        Underwriter's Laboratories of Canada (ULC)
  - .1        CAN-ULC-S101-04, Standard Methods of fire Endurance Tests of Building Construction and Materials.
  - .2        CAN-ULC-S102-03, Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

**1.3                SUBMITTALS**

- .1        Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Product Data:
  - .1        Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2        Submit two copies of WHMIS MSDS - Material Safety Data Sheets.
- .3        Samples: submit duplicate 300 x 300 mm size sample of exposed fireproofing for approval of texture and colour.
- .4        Quality assurance submittals: submit following in accordance with Section 01 45 00 - Quality Control.

- .1 Test Reports:
  - .1 Submit product data including certified copies of test reports verifying fireproofing applied to substrate as constructed on project will meet or exceed requirements of Specification.
  - .2 Submit test results in accordance with CAN-ULC-S101 for fire endurance and CAN-ULC-S102 for surface burning characteristics.
  - .3 For assemblies not tested and rated, submit proposals based on related designs using accepted fireproofing design criteria.
- .2 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .3 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, and cleaning procedures.
- .4 Manufacturer's Field Reports: submit to manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.

#### **1.4 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Installer: company specializing in sprayed-on fireproofing with documented recognized experience approved by manufacturer.
- .2 Mock-ups:
  - .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
  - .2 Apply fireproofing to approximately 10 m 5 area of surface to be treated.
  - .3 Mock-up will be used:
    - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
    - .2 For testing to determine compliance with performance requirements, refer to article 3.4 Field Quality Control.
  - .4 Locate where directed by DCC Representative.
  - .5 Allow 24 hours for inspection of mock-up by DCC Representative before proceeding with fireproofing work.
  - .6 When accepted, mock-up will demonstrate minimum standard of quality required for this work. Approved mock-up may remain as part of finished work.
- .3 Site Meetings:
  - .1 Convene pre-installation meeting one week prior to beginning work of this Section and on-site installations, with contractor's representative and DCC Representative to:
    - .1 Verify Project requirements.
    - .2 Review installation and substrate conditions.
    - .3 Co-ordination with other building subtrades.
    - .4 Review manufacturer's installation instructions and warranty requirements.

- .2 Prior to start of Work arrange for site visit with DCC Representative to examine existing site conditions adjacent to demolition work.
- .4 Quality control: as part of Manufacturer's Services described in PART 3 - FIELD QUALITY CONTROL, schedule site visits, to review Work, at stages listed.
  - .1 After delivery and storage of products, and when preparatory Work is complete but before installation begins.
  - .2 Twice during progress of Work at 25% and 60% complete.
  - .3 Upon completion of Work, after cleaning is carried out.

### **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
  - .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
  - .3 Deliver packaged materials in original unopened containers, marked to indicate brand name, manufacturer, and ULC markings.
- .2 Storage and Protection:
  - .1 Store materials indoors in dry location.
  - .2 Store and protect materials from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
  - .3 Damaged or opened containers will be rejected.
  - .4 Packaging to indicate shelf-life and materials to be applied prior to expiration of shelf-life.
  - .5 Provide temporary enclosures to prevent spray from contaminating air beyond application area.
  - .6 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of fireproofing materials.

### **1.6 AMBIENT CONDITIONS**

- .1 At temperatures less than 5 degrees C, ensure that 5 degrees C air and substrate temperature is maintained during and for 24 hours after application. Ensure that natural ventilation to properly dry the fireproofing during and subsequent to its application is provided. In enclosed areas lacking openings for natural ventilation, ensure that interior air is circulated and exhausted to the outside.
- .2 Maintain relative humidity within limits recommended fireproofing manufacturer.
- .3 Ensure that natural ventilation to properly dry fireproofing during and subsequent to its application is provided.
- .4 In enclosed areas lacking openings for natural ventilation, provide minimum of 4 air exchanges per hour by forced air circulation.

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**1.7 WASTE MANAGEMENT AND DISPOSAL**

- .1 Waste Management: in accordance with Section 01 35 21 – LEED Requirements, Appendix B, Waste Management.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Sprayed fireproofing: ULC certified cementitious fireproofing qualified for use in ULC Designs specified.
- .2 Curing compound: type recommended by fireproofing manufacturer, qualified for use in ULC Designs specified.
- .3 Fireproofing: minimum dry density and cohesion/adhesion properties as follows:
  - .1 Fireproofing for structural components located in mechanical rooms and storage areas: minimum applied dry density of 640 kg per cubic meter when measured in accordance with ASTM E605 and minimum cohesion/adhesion strength of 350 kPa when measured in accordance with ASTM E736.
  - .2 Material shall not crack or delaminate from the surface to which it is applied when tested in accordance with ASTM E759.
  - .3 Minimum compressive strength: 3.45 Mpa when tested in accordance with ASTM E761.
  - .4 Spray-Applied fireproofing material: not contribute to corrosion of test panels.
  - .5 Dust removal: not exceed 0.25 gram per square meter when tested in accordance with ASTM E859.

**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 PREPARATION**

- .1 Substrate: free of material, which would impair bond.
- .2 Verify that painted substrates are compatible and have suitable bonding characteristics to receive fireproofing.
- .3 Remove incompatible materials.
- .4 Ensure that items required to penetrate fireproofing are placed before installation of fireproofing.

- .5 Ensure that ducts, piping, equipment, or other items which would interfere with application of fireproofing are not positioned until fireproofing work is completed.
- .6 Ensure concrete has been placed on steel decks above fireproofing prior to application of fireproofing of supporting structure.

### 3.3 APPLICATION

- .1 Apply bonding adhesive or primer to substrate if recommended by manufacturer.
- .2 Apply fireproofing to correspond with tested assemblies, or acceptable calculation procedures to provide following fire resistance ratings.
  - .1 Apply fireproofing to steel joists and floor deck to obtain a one (1) hour fire resistance. Refer to Drawings for rooms requiring fireproofing.
- .3 Apply fireproofing over substrate, building up to required thickness to cover substrate with monolithic blanket of uniform density and texture.
- .4 Apply fireproofing directly to open web joists without use of expanded lath.
- .5 Tamp smooth surfaces.
- .6 Apply curing compound to surface of cementitious fireproofing as required by manufacturer.

### 3.4 FIELD QUALITY CONTROL

- .1 Manufacturer's Field Services:
  - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product and submit Manufacturer's Field Reports as described in PART 1 - SUBMITTALS.
  - .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
  - .3 Schedule site visits, to review Work, as directed in PART 1 - QUALITY ASSURANCE.
- .2 Inspection and Site Tests:
  - .1 Inspection and testing of fireproofing will be carried out by Testing Laboratory designated by DCC Representative.
  - .2 DCC Representative will pay costs for testing, as specified in Section 01 29 83 - Payment Procedures: Testing Laboratory Services.
  - .3 Testing Laboratory shall randomly sample and verify the thickness and the density of the fireproofing in accordance with provisions of ASTM E605.

### 3.5 PATCHING

- .1 Patch damage to fireproofing caused by testing or by other trades before fireproofing is concealed, or if exposed, before final inspection.

- .2 Patch in accordance with fireproofing manufacturer's instructions.

**3.6 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Clean surfaces not indicated to receive fireproofing of sprayed material within 24 hours period after application.
- .3 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**

**Part 1        General****1.1        RELATED SECTIONS**

- .1        Section 08 11 10 – Metal Doors and Frames.

**1.2        REFERENCES**

- .1        American National Standards Institute (ANSI)/Builders Hardware Manufacturers Association (BHMA).
  - .1        ANSI/BHMA A156.1-2000, American National Standard for Butts and Hinges.
  - .2        ANSI/BHMA A156.2-2003, Bored and Preassembled Locks and Latches.
  - .3        ANSI/BHMA A156.4-2000, Door Controls - Closers.
  - .4        ANSI/BHMA A156.5-2001, Auxiliary Locks and Associated Products.
  - .5        ANSI/BHMA A156.13-2002, Mortise Locks and Latches Series 1000.
  - .6        ANSI/BHMA A156.16-2002, Auxiliary Hardware.
  - .7        ANSI/BHMA A156.18-2006, Materials and Finishes.
- .2        Canadian Steel Door and Frame Manufacturers' Association (CSDFMA).
  - .1        CSDFMA Canadian Metric Guide for Steel Doors and Frames (Modular Construction): standard hardware location dimensions.

**1.3        SUBMITTALS**

- .1        Product Data:
  - .1        Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Samples:
  - .1        Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
  - .2        Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
  - .3        After approval samples will be returned for incorporation in the Work.
- .3        Hardware List:
  - .1        Submit contract hardware list in accordance with Section 01 33 00 - Submittal Procedures.
  - .2        Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
- .4        Manufacturer's Instructions:
  - .1        Submit manufacturer's installation instructions.

**1.4 Closeout Submittals**

- .1 Provide operation and maintenance data for door closers, locksets, door holders electrified hardware and fire exit hardware for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Sheets: Provide instructions for the use and maintenance of door hardware, which will be incorporated into the O & M manual.

**1.5 QUALITY ASSURANCE**

- .1 Regulatory Requirements:
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.
- .4 Storage and Handling Requirements:
  - .1 Store materials off ground, indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect door hardware from[nicks, scratches, and blemishes.
  - .3 Protect prefinished surfaces with[wrapping or strippable coating.
  - .4 Replace defective or damaged materials with new.
- .5 Sort waste for their reuse and / or recycling, in compliance with section 01 74 11 Cleaning

**1.7 EXTENDED WARRANTIES**

- .1 Provide the following manufacturer's warranties beyond the date of expiration of the Contract warranty:
  - .1 Mortise Hinges.....Lifetime
  - .2 Locks.....7 yrs.
  - .3 Door closers -mechanical .....10 yrs.
  - .4 Floor/Wall stops .....1 yr.
  - .5 All other hardware items .....1 yr.

**Part 2 Products****2.1 GENERAL**

- .1 All articles of the same type must come from the same manufacturer.

**2.2 DOOR HARDWARE**

- .1 Locksets, Latchsets, Deadlocks
  - .1 Mortise locks compliant to ANSI/BHMA-A156.13, Grade 1 1000 series, as stated in Hardware schedules
  - .2 Regular locks: box type, lip projection not beyond jamb.
  - .3 Cylinder lock: keys part of keying system per instructions
- .2 Butt Hinges and other hinges:
  - .1 Butt hinges and other hinges compliant with ANSI/BHMA-A156.1, designated by a numeric code preceded by the letter A and following the instructions regarding dimension and finish, as listed on the Hardware schedule

**2.3 FASTENINGS**

- .1 Only fasteners supplied by the manufacturer may be used. Failure to comply with this requirement may compromise the warranties and invalidate the certification labels, if applicable.
- .2 Supply all required bolts, screws, expansion shields, anchors, and other related accessories for satisfactory attaching or installing of all finish hardware.
- .3 Exposed fasteners shall match finish of, and be of compatible material with hardware.
- .4 Where push/pull hardware is scheduled, door pull must be through-fastened and have fasteners concealed by push plate on opposite side.

**Part 3 Execution****3.1 INSTALLATION**

- .1 Manufacturer's instructions: Comply with the manufacturer's written requirements, recommendations and specifications, including the technical bulletins and installation instructions specified in the product catalogs and packaging cartons, as well as the specifications in the data sheets. 1
- .2 Supplied door and frame fabricator with manufacturer's templates and complete instructions allowing them to prepare their product to receive the hardware articles described in this section.
- .3 Supply the manufacturer's installation instructions with each hardware item.
- .4 Install standard hardware items in accordance with the requirements of the Canadian Metric Guide for Steel Doors and Frames (Modular Construction), developed by ACFPA.

- .5 Where door stop contacts door pulls, mount stop to strike bottom of pull.
- .6 Use only manufacturer's supplied fasteners. Failure to comply may void manufacturer's warranties and applicable licensed labels. Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.
- .7 Remove construction cores when directed by DCC Representative; install permanent cores and check operation of locks.

### **3.2 ADJUSTING**

- .1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.
- .2 Lubricate hardware, operating equipment and other moving parts.
- .3 Adjust door hardware to provide tight fit at contact points with frames.

### **3.3 CLEANING**

- .1 Cleaning during the works: carry out cleaning in compliance with section 01 74 11 – Cleaning
  - .1 Leave the premises clean at the end of each work day;
  - .2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions
  - .3 Remove protective material from hardware items where present.
  - .4 Upon completion of installation, remove surplus materials, rubbish, tools and equipment in compliance with section 01 74 11 – Cleaning.

### **3.4 PROTECTION**

- .1 Protect all materials and installed elements against damages during the construction works.
- .2 Repair any damages to materials or adjacent materials caused by installation of the door hardware.

### **3.5 HARDWARE LIST**

- .1 Refer to drawings

**END OF SECTION**



