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**Partie 1      General**

**1.1            RELATED REQUIREMENTS**

- .1      Section 05 50 00 – Metal fabrications.
- .2      Section 06 40 00 – Architectural woodwork
- .3      Section 09 21 16 – Gypsum board assemblies
- .4      Section 09 22 16 – Non structural metal framing
- .5      Division 26 - Electricity, for power supply.

**1.2            REFERENCES**

- .1      Aluminum Association (AA)
  - .1      AA DAF 45-03(R2009), Designation System for Aluminum Finishes.
- .2      American Architectural Manufacturers Association (AAMA)
  - .1      AAMA 609/610-09, Cleaning and Maintenance Guide for Architecturally Finished Aluminum.
- .3      ASTM International
  - .1      ASTM A167-99(R2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
  - .2      ASTM A276-10, Standard Specification for Stainless Steel Bars and Shapes.
  - .3      ASTM A480/480M-11, Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet and Strip.
- .4      Architectural Woodwork Manufacturers' Association of Canada (AWMAC)
  - .1      Architectural Woodwork Standards 2009.
- .5      Canadian General Standards Board (CGSB)
  - .1      CAN/CGSB-12.1-M90, Tempered or Laminated Safety Glass.
  - .2      CAN/CGSB-12.12-M90, Plastic Safety Glazing Sheets.
- .6      CSA International
  - .1      CSA O141-F05(C2009), Softwood Lumber.
  - .2      CAN/CSA-Z809-F08, Sustainable Forest Management.
- .7      Forest Stewardship Council (FSC)
  - .1      FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .8      National Fire Prevention Association (NFPA)
  - .1      NFPA 80-2010, Standard for Fire Doors and Other Opening Protectives.
- .9      National Hardwood Lumber Association (NHLA)
  - .1      Rules for the Measurement and Inspection of Hardwood and Cypress 2007.

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- .11 Sustainable Forestry Initiative (SFI)
  - .1 SFI-2010-2014 Standard.
- .12 The Master Painters Institute (MPI)
  - .1 Architectural Painting Specification Manual - current edition.
    - .1 MPI #25 Cleaner, Etching, for Galvanized Metal.
    - .2 MPI #26 Primer, Galvanized Metal, Cementitious.
    - .3 MPI #46 Undercoat, Enamel, Interior.
    - .4 MPI #80 Primer Vinyl Wash.
- .13 Underwriters Laboratories of Canada (ULC)
  - .1 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies.
  - .2 CAN/ULC-S105-09, Standard Specification for Fire Door Frames.

### **1.3 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 coiling counter doors and hardware and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
  - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Quebec, Canada.
  - .2 Indicate each type of coiling counter door, hardware placement, details and characteristics of electric accessories including power supply, motor strength, auxiliary controls and wiring diagram.
  - .3 Indicate each type of coiling counter door, arrangement of hardware, operating mechanism and required clearances.

### **1.4 SAMPLES**

- .1 Submit samples in accordance with Section 01 33 00 - Submittals.
- .2 Submit duplicate samples 300 mm for each of the following: slats and guides for each type.
- .3 Manufacturer's instructions:
  - .1 Submit manufacturer's installation instructions.
- .4 Submit samples of manufacturer's field inspection reports.

## **1.5 CLOSEOUT SUBMITTALS**

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for coiling counter doors and hardware for incorporation into manual.

## **1.6 QUALITY ASSURANCE**

- .1 Regulatory Agency Approvals:
  - .1 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada to CAN/ULC-S104 and CAN/ULC-S105 for ratings specified or indicated.
  - .2 Fabricate and install fire rated coiling metal counter doors in accordance with NFPA 80 to suit fire protection rating required.
- .2 Certifications: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

## **1.7 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect coiling counter doors from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return by manufacturer of pallets, crates, padding, packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **1.8 ACCEPTABLE PRODUCTS AND MATERIALS**

- .1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products

## **Partie 2 Products**

### **2.1 MATERIALS**

- .1 Coiling doors.
- .2 Steel extrusions and plates: Type 300W, to CAN/CSA-G40.20/G40.21.
- .3 Galvanized steel sheet: commercial quality, with Coating Designation Z180 or Z275, to ASTM A653M.

- .4 Aluminum sheet metal: plain finish utility sheet.
- .5 Aluminum extrusions: Aluminum Association alloy AA6063-T5.
- .6 Primer for steel plates and other steel elements: to CAN/CGSB-1.40M.
- .7 Stainless steel sheet metal: to ASTM A167, Type 304, with satin finish.

## 2.2 COILING COUNTER DOORS

- .1 Rolling security closure constructed of horizontal 8 mm diameter aluminum rods encased in 8 mm in diameter aluminum slats, 64 mm on centre extruded aluminum tubes 11 mm in diameter by 229 mm long connected with vertical aluminum mesh 16 mm by 81 mm.
- .2 End plates 5 mm thick minimum, to fit coil size, to support ends of barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.
- .3 Brackets: 44 mm x 102 mm aluminum tube and 38 mm x 51 mm x 5 mm fasteners, anchored to floor and structure above ceiling.
- .4 Extruded aluminum bottom bar.
- .5 Furnish guides of 51 mm x 32 mm x full height extruded aluminum, mounted to jambs, fitted with nylon stripping. Furnish stop for each guide.
- .6 Barrel: steel pipe barrel, 168 mm minimum diameter x 5 mm thick, designed to limit maximum deflection under load to 2.5 mm per linear metre, and designed to house counterbalance assembly.
- .7 Counterbalance assembly: oil tempered helical steel torsion springs, pre-lubricated and mounted on a continuous solid cold rolled steel inner shaft. Shaft bears on self-aligning, permanently lubricated ball bearing assemblies. Springs to provide a minimum of 20,000 operating cycles. Easy-access springs.
- .8 Electric motor:
  - .1 Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.
  - .2 Emergency egress release: Supply a flush manually activated emergency egress device to disengage motor in case of an emergency.
  - .3 Above lintel motor operation, two access panels, location and dimensions indicated on drawings.
- .9 Heavy duty extruded aluminum section, bell-shaped to provide reinforcement. Bottom bar to house lock mechanism. Center lock mechanism to be 2-point deadlock which activates 7/16" (11mm) steel lock bars at each end. Standard MobilFlex cylinders operable from both sides. Removal of bottom bar not necessary to change the cylinders. For counter closures, bottom bar is to be of extruded aluminum 1 1/4" (32mm) wide x 2" (51mm) high.
- .10 Cylinder: 1 5-pin mortise cylinder lock.

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**2.3 ALUMINUM FINISHES**

- .1 Finish exposed surfaces of aluminum components to Aluminum Association Designation System for Aluminum Finishes.
  - .1 Clear anodic finish: designation AA AA-M12C22A31.

**Partie 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for coiling counter doors 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 INSTALLATION**

- .1 Install coiling counter door in accordance with manufacturers' printed instructions.
- .2 Install electric motors, control devices, push button pads, relays and other electric appliances needed to operate doors.
- .3 Install necessary wiring from hook-up near each door.
- .4 Adjust operable parts for correct function and smooth operation.

**3.3 FIELD QUALITY CONTROL**

- .1 Have manufacturer of products supplied under this Section review Work involved in handling, installation/application, protection and cleaning of its product[s], and submit written reports in acceptable format to verify compliance of Work with Contract.
- .2 Manufacturer's field services:
  - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of its products, and submit written reports in acceptable format to verify compliance of Work with Contract within 3 days of review.
  - .2 Submit 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:
    - .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.

### **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 Perform cleaning of aluminum components in accordance with: AAMA 609.
  - .3 Clean aluminum with damp rag and approved non-abrasive cleaner in accordance with manufacturer's instructions.
  - .4 Remove traces of primer, caulking; clean doors and frames.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

### **3.5 PROTECTION**

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

**END OF SECTION**