
Partie 1 General

1.1 RELATED REQUIREMENTS

- .1 The list of Work in this division is indicative but non-limiting. It does not exclude Work described in other specification divisions shown on the drawings or required for full execution of the Work as intended on the drawings.
- .2 Section 05 12 23 Structural Steel for Buildings.
- .3 Section 06 10 00 Rough Carpentry.
- .4 Section 06 10 01 Structural Carpentry.
- .5 Section 07 21 13 Board Insulation.
- .6 Section 07 21 23 Loose Fill Insulation.
- .7 Section 07 52 00 Modified Bituminous Membrane Roofing.
- .8 Section 07 62 00 Sheet Metal Flashing and Trim.
- .9 Section 07 92 00 Joint Sealants.

1.2 REFERENCES

- .1 ASTM International
 - .1 ASTM A506-12, Standard Specification for Alloy and Structural Alloy Steel, Sheet and Strip, Hot-Rolled and Cold-Rolled.
 - .2 ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .3 ASTM D2369-10e1, Standard Test Method for Volatile Content of Coatings.
 - .4 ASTM D2832-2011, Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
 - .5 ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .2 CSA International
 - .1 CSA B111-1974(R2005), Wire Nails, Spikes and Staples.
- .3 Green Seal Environmental Standards (GS)
 - .1 GS-11-11, Standard for Paints and Coatings.
 - .2 GS-36-11, Standard for Adhesives for Commercial Use.
- .4 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - [édition courante].
 - .1 MPI #76, Primer, Alkyd, Quick Dry, for Metal.

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 roof hatches 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.
 - .1 Indicate VOC's for caulking materials during application and curing.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Canada, in the province.
 - .1 Indicate size and description of components, materials, attachment devices, description of frame and finish, and construction details.
- .4 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

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

1.5 CLOSEOUT SUBMITTALS

- .1 Soumettre les documents/éléments requis conformément à la section 01 78 00 - Documents/Éléments à remettre à l'achèvement des travaux.
- .2 Submit operation and maintenance data for hardware complete with pertinent details, spare parts lists and warnings against harmful maintenance materials and practices for incorporation into manual.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle 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 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 roof hatches from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

1.7 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 DESIGN REQUIREMENTS

- .1 Roof hatches must withstand snow load of 195 kN/m², and wind uplift of 97 kNm/m² without damage to unit or permanent deformation to seals.

2.2 MATERIALS

- .1 Galvanized steel sheet: commercial quality to ASTM A653/A653M, Z275 designation zinc coating.
- .2 Aluminum sheet: mill finish plain utility sheet.
- .3 Aluminum: extruded sections of AA6063-T5 alloy, all components one piece without splices.
- .4 Copper sheet: to ASTM B370 cold rolled.
- .5 Gaskets: extruded silicone, with full recovery after 50% compression.
- .6 Fasteners: screws to manufacturer's standard cadmium plated steel.
- .7 Sealants: to Section 07 92 00; colour selected by Departmental Representative.
 - .1 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.
- .8 Primers, Paints and Coating: in accordance with manufacturer's recommendations for surface conditions.
- .9 Primer paint for steel: to MPI #76.
- .10 Isolation coating: alkali resistant bituminous paint or epoxy solution.
- .11 Mineral fibre insulation: 25 mm (for all hatches).
- .12 Vented sheet metal covering (QM area):
 - .1 Prepainted galvanized steel sheet metal 0.85 mm with edges overlapping hatch covers and perforated to dimensions required for vent.
- .13 Hatch vents (QM area): enamelled steel 0.7 mm thick, grey, vented at the top, with galvanized steel grill and filter media to CAN-3-A930M82 and ASTM-527.
- .14 Insulated for vented hatch (QM area): enamelled steel 0.85 mm thick, grey, sized to fit in hatch vent.
- .15 Separator membrane for vented hatch (QM area): SBS and polymer modified high-temperature self-adhesive membrane with woven polyethylene.
 - .1 To ASTM 1970 and ASTM E96.
 - .2 Application temperature: 10 to 50oC.
 - .3 Service temperature: -49 to 239oC.
- .16 Primer for separator membrane: synthetic SBS rubber, resin and solvent.
 - .1 Weight at 20oC: 0.79 kg/l.

- .2 Solids content: 24%.
- .3 Brookfield viscosity at 25°C: 200 cP.

2.3 HATCH COVER

- .1 Metal Cover
 - .1 Preformed, galvanized steel, insulated sandwich construction, 25 mm overall thickness.

2.4 CURBED FRAME

- .1 Preformed metal curb: 1.9 mm thick x 915 mm x 915 mm x 915 x 305 mm high, insulated sandwich construction, wood fibre insulation, 25 mm mm overall thickness, with deck flange for attachment.

2.5 ACCESSORIES

- .1 Screws: galvanized steel for curb to structure.
- .2 Hinges: type recommended by roof hatch manufacturer.
- .3 Latch: positive snap with turn handles inside and out and padlock hasps inside.
- .4 Securing latch: hold open operating arm with vinyl grip handle to permit one-handed release.
- .5 Resilient gasket/seal to inner face of lid in contact hatch lid.

2.6 ATTIC HATCHES

- .1 Type 1 (west wing)
 - .1 Finish: steel primed for paint:
 - .2 No fire resistance or thermal insulation.
 - .3 Dimensions: 915mm X 915mm X 1.6 mm thick.
 - .4 Frame pre-drilled for gypsum board.
 - .5 Cover: designed for gypsum board.
 - .6 Piano hinges.
 - .7 Securing latch.
- .2 Type 2: (central building)
 - .1 Finish: steel primed for paint:
 - .2 One-hour fire resistance with thermal insulation (mineral fibre insulation).
 - .3 Dimensions: 915mm X 915mm X 1.6mm thick.
 - .4 Frame pre-drilled for gypsum board.
 - .5 Piano hinges.
 - .6 Securing latch.

- .3 Type 3: (east wing – adm. and qm)
 - .1 Finish: primed steel.
 - .2 1 hour fire resistance with thermal insulation (mineral fibre insulation).
 - .3 Dimensions: 915 mm x 915 mm x 1.6 mm thick.
 - .4 Frame predrilled for gypsum board.
 - .5 Piano hinge.
 - .6 Securing latch.
 - .7 Semi-rigid 25 mm mineral fibre insulation.

2.7 EXTERIOR ACCESS HATCHES WITH INTEGRATED VENTS (4 REQUIRED QM AREA)

- .1 Access hatches to modify to ventilate attic with vent attached to hatch cover.
- .2 Refer to points 2.2.12 to 2.2.16 inclusively above, for the list of hatch components.

2.8 FABRICATION

- .1 Fabricate components free of twists, bends, or visual distortion and insulated. Weld corners and joints.
- .2 Assemble roof hatch components as indicated.
- .3 Ensure continuity of weather-tight seal.
- .4 Design flashings and extrusions to collect and lead off accumulated condensation.
- .5 Zinc plate hardware and attachments and shop prime ready for field painting.

Partie 3 Execution

3.1 INSPECTION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for roof hatch installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental 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 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.3 INSTALLATION

- .1 Erect components plumb, level and in proper alignment.
- .2 Ensure continuity of building envelope air barrier and vapour retarder systems.
- .3 Adjust and seal assembly with provision for expansion and contraction of components.
- .4 Secure brake formed metal curb to structure.
- .5 Coat aluminum and copper in contact with dissimilar materials, with isolation coating.
- .6 Secure and seal frame to curb.

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.
 - .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 roof hatch installation.

END OF SECTION