
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 03 30 00 Cast-in-place Concrete.
- .3 Section 04 43 16 Granite Veneer Cladding.
- .4 Section 04 43 26 Dimension Stone Veneer Cladding.
- .5 Section 05 12 23 Structural Steel for Buildings.
- .6 Section 06 10 00 Rough Carpentry.
- .7 Section 06 18 00 Glue-laminated Construction.
- .8 Section 06 20 00 Finish Carpentry.
- .9 Section 07 21 13 Board Insulation.
- .10 Section 07 21 16 Blanket Insulation.
- .11 Section 07 21 29.03 Sprayed Insulation - Polyurethane.
- .12 Section 07 26 00 Vapour Retarders.
- .13 Section 07 62 00 Sheet Metal Flashing and Trim.
- .14 Section 07 92 00 Joint Sealants.
- .15 Section 23 37 20 Louvres, Air Intakes and Other Vents.

1.2 REFERENCES

- .1 The Aluminum Association Inc. (AAI)
 - .1 AAI DAF-45-2003, Designation System for Aluminum Finishes - 9th Edition.
- .2 Air Movement and Control Association International (AMCA)
 - .1 AMCA 500-D-98, Laboratory Methods of Testing Dampers for Rating.
 - .2 AMCA 500-L-99, Laboratory Methods of Testing Louvers for Rating.
 - .3 AMCA 501-03, Application Manual for Air Louvers.
 - .4 AMCA 511-99(R2004), Certified Ratings Program for Air Control Devices.
- .3 American National Standards Institute (ANSI)
 - .1 ANSI H35.1/H35.1M-06, Alloy and Temper Designation Systems for Aluminum.

- .4 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A167-2004, Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM A653/A653 M-05a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .3 ASTM A1008/A1008M-05b, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened and Bake Hardenable.
 - .4 ASTM B32-04, Standard Specification for Solder Metal.
 - .5 ASTM B209-04, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - .6 ASTM B221-05a, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - .7 ASTM B370-03, Standard Specification for Copper Sheet and Strip for Building Construction.
 - .8 ASTM D523-89(1999), Standard Test Method for Specular Gloss.
 - .9 ASTM D822-01, Standard Practice for Filtered Open-Flame Carbon-Arc Exposure of Paint and Related Coatings.
- .5 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.213-2004, Etch Primer (Pretreatment Coating or Tie Coat for Steel and Aluminum.
 - .2 CAN2-93.1-M85, Sheet Aluminum Alloy, Prefinished, Residential.

1.3 ACTION AND INFORMATIONAL 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 WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Quebec, Canada.
 - .2 Indicate fabrication and erection details, including anchorage, accessories, and finishes.
- .4 Samples:
 - .1 Submit duplicate samples of each type of louvre and vent showing colour and finish.
 - .2 Show frame detail, screening and finish.

- .3 Where colour is not indicated, submit manufacturer's standard colours to Departmental Representative for selection.
- .5 Quality Assurance Submittals: submit following in accordance with Section 01 45 00 - Quality Control.
 - .1 Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.
- .6 Closeout Submittals:
 - .1 Provide operation and maintenance data for manual or motorized operated louvres for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle 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 materials to the site in undamaged condition.
- .2 Storage and Protection:
 - .1 Store materials off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Protect louvres from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .3 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.5 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 Weather resistant louvres, with bird screens made to withstand a wind load of not less than 1.44 kilopascals.
- .2 Wall louvers: complete with AMCA certified ratings program seal for air performance and water penetration in accordance with AMCA 500-D, AMCA 500-L and AMCA 511.

- .3 Ratings to indicate water penetration of 0.06 kilograms or less per square meter of free area at free velocity of 244 meters per minute.
- .4 Galvanized steel sheet: commercial quality to ASTM A653/A653M with Z275 zinc coating.
- .5 Steel sheet: commercial quality to ASTM A1008/A1008M with Class I matte finish.
- .6 Aluminum extrusions: to ASTM B221 alloy 6063-T5/T52.
- .7 Nails and fasteners: same material as fabricated items.
- .8 Gaskets: manufacturer's best recommendations.
- .9 Primer: to CAN/CGSB-1.213 for aluminum surfaces.
- .10 Prefinished aluminum sheet concealed (closed) back
 - .1 Finish aluminum sheet metal with UV resistant factory applied coating.
 - .1 Colour selected by Departmental Representative from manufacturer's standard range.
 - .2 Specular gloss: 30 units, plus or minus 5 units, to ASTM D523.
 - .3 Adhesion: to ASTM D3359.
 - .4 Pencil hardness to ASTM D3363.
 - .5 Flexibility: to ASTM D4145.
 - .6 Coating thickness: to ASTM D 1400.
 - .1 First coat: 0.02032 mm (0.80 mil).
 - .2 Finish coat: 0.2032 mm (0.80 mil).
 - .3 Protective coating (clear): 0.2032 mm (0.80 mil).
 - .7 Resistance to accelerated weathering for chalk rating of 8, colour fade 5 units or less and erosion rate less than 20% to ASTM D2244 and ASTM D4214, as follows:
 - .1 Outdoor exposure period 4000 hours.
 - .2 Humidity resistance exposure period 4000 hours, to ASTM D714 and ASTM D2247.
- .11 Extruded aluminum louvres:
 - .1 Materials: aluminum extrusions 6063-T5.
Blade: stormproof pattern with centre watershed in blade, reinforcing bosses and maximum blade length of 3000 mm (10 ft) maximum: depth 101.6 mm, blade angle 45°.
 - .2 L shape aluminum frame minimum 2.06 thick.
 - .3 Aluminum anti-gust louvres 2.06 mm thick.
 - .4 Anti-gust blade centre distance: 127.00 mm.
 - .5 Free area: 49.3% of total section.
 - .6 Birdscreens: 2 mm diameter aluminum wire, 12 mm exhaust, 19 mm intake mesh, 2 mm diameter wire, on inside face of louvres in formed U-frame.

- .7 Insect screens: 0.3 mm diameter aluminum wire, 18 x 14 mesh with 44% free area, secured to aluminum frame.
- .8 Finish: shutters, frames and exposed surfaces:
 - .1 Acceptable product:
 - .1 Duranar XL
 - .2 Replacement materials or products: approved by addendum in accordance with Instructions to Bidders.
- .9 Arrange blades, mullions and frame extrusions as indicated.
- .10 Install concealed vertical stiffeners spaced to meet required loads, and as detailed and indicated on drawings.
- .11 Frame, head, sill and jamb: 100 mm (4 in) deep one piece extruded aluminum, minimum 3 mm thick with approved caulking slot, integral to unit.
- .12 Sheet metal backing for non-active part as indicated in 2.1.10. Colour selected by Departmental Representative.
- .13 Acceptable products:
 - .1 Cométal
 - .2 C/S. Louvers
 - .3 All lite architectural products
 - .4 Replacement materials or products: approved by addendum in accordance with Instructions to Bidders.
- .12 Door louvres:
 - .1 Material: extruded aluminum alloy 6063-T5.
 - .2 Louvres: extruded aluminum, 2.06 mm thick.
 - .1 Minimum free area of 35%.
 - .2 Provide fasteners to suit louvre material.
 - .3 Aluminum anti-gust blades minimum 2.06 mm thick, finish and centre axes as adjacent blades.
 - .4 Provide separate adjustable trim member for clamping louvre in opening.
 - .5 Miter frame and trim members at corners and secure rigidly with corner brackets.
 - .6 Brace plates: 3 mm thick x 150 mm wide, diagonal and sides. Finish and alloy as louvres.
 - .7 Secure interior frame with countersunk tamperproof screws.
 - .8 Acceptable products:
 - .1 Cométal
 - .2 C/S.Louvres
 - .3 All lite architectural products
 - .4 Replacement materials and products: approved by addendum in accordance with Instructions to Bidders.

2.2 FINISH

- .1 Finish exposed surfaces of aluminum components in accordance with AAI DAF-45 and ANSI H35.1/H35.1M for Aluminum Finishes.
 - .1 Baked enamel, thermosetting applied to chrome phosphate conversion coating aluminum.
 - .2 Acceptable products:
 - .1 Duranar XL Plus
 - .2 Replacement materials and products: approved by addendum in accordance with Instructions to Bidders.

Partie 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 INSTALLATION

- .1 Install louvres and vents where indicated.
- .2 Set adjustable louver blades for uniform alignment in open and closed positions.
- .3 Adjust louvres so moving parts operate smoothly.
- .4 Repair damage to louvres and vents to match original finish.
- .5 Install wall louvers using strap anchors and jamb fasteners as appropriate for wall construction and in accordance with manufacturer's recommendations.

3.3 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

3.4 PROTECTION

- .1 Paint copper or copper-bearing alloys in contact with dissimilar metal with heavy-bodied bituminous paint or separate with inert membrane.
- .2 Where aluminum contacts metal other than zinc, paint dissimilar metal with primer and two coats of aluminum paint.
- .3 Paint metal in contact with mortar, concrete, or other masonry materials with alkali-resistant coatings such as heavy-bodied bituminous paint.
- .4 Paint wood or other absorptive materials that may become repeatedly wet and in contact with metal with two coats of aluminum paint or coat of heavy-bodied bituminous paint.

END OF SECTION