

**Part 1 General**

**1.1 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM A167-, Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
  - .2 ASTM A240/A240, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
  - .3 ASTM A653/A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - .4 ASTM A792/A792, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
  - .5 ASTM B32-, Standard Specification for Solder Metal.
  - .6 ASTM B370-, Standard Specification for Copper Sheet and Strip for Building Construction.
  - .7 ASTM D523-, Standard Test Method for Specular Gloss.
  - .8 ASTM D822-, Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
- .2 Canadian Standards Association (CSA International)
  - .1 CSA B111-, Wire Nails, Spikes and Staples.

**1.2 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 for sheet metal flashing systems materials, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
  - .1 Shop drawings: submit drawings stamped and signed by professional Departmental Representative registered or licensed in Province of Quebec, Canada. The engineer must be a member of *l'Ordre des ingénieurs du Québec*
- .4 Samples:
  - .1 Submit duplicate 50 x 50 mm samples of each type of sheet metal material, finishes and colours.
- .5 Quality assurance submittals: submit following in accordance with Section 01 45 00 - Quality Control.
  - .1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.

- .2 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.

### **1.3 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Waste Management and Disposal:
  - .1 Separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **Part 2 Products**

### **2.1 SHEET METAL MATERIALS**

- .1 Zinc coated steel sheet: 26 gage, commercial quality to ASTM A653/A653M, with Z275 designation zinc coating.

### **2.2 PREFINISHED STEEL SHEET**

- .1 Prefinished steel with factory applied polyvinylidene fluoride.
  - .1 Colour selected by Departmental Representative from manufacturer's standard range.
  - .2 Coating thickness: not less than 22 micrometres.
  - .3 Resistance to accelerated weathering for chalk rating of 8, colour fade 5 units or less and erosion rate less than 20 % to ASTM D822 as follows:
    - .1 Outdoor exposure period 2500 hours.
    - .2 Humidity resistance exposure period 5000 hours.

### **2.3 ACCESSORIES**

- .1 Plastic cement: to CAN/CGSB 37.5.
  - .1 Maximum VOC limit 50 g/L to SCAQMD Rule 1168 to GSES GS-36.
- .2 Underlay for metal flashing: dry sheathing to CAN/CGSB-51.32 asphalt laminated 3.6 to 4.5 kg kraft paper No. 15 perforated asphalt felt to CSA A123.3.
- .3 Sealants:
  - .1 Maximum VOC limit 50 g/L to SCAQMD Rule 1168 to GSES GS-36.
- .4 Cleats: of same material, and temper as sheet metal, minimum 50 mm wide. Thickness same as sheet metal being secured mm.
- .5 Fasteners: of same material as sheet metal, to CSA B111, ring thread flat head roofing nails of length and thickness suitable for metal flashing application.
- .6 Washers: of same material as sheet metal, 1 mm thick with rubber packings.
- .7 Solder: to ASTM B32, alloy composition Sn 60 Pb 40.

- .8 Flux: rosin, cut hydrochloric acid, or commercial preparation suitable for materials to be soldered.
- .9 Touch-up paint: as recommended by prefinished material manufacturer.
- .1 Maximum VOC limit 50 150 g/L to Standard GS-11 to SCAQMD Rule 1113.

## **2.4 FABRICATION**

- .1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series details as indicated.
- .2 Form pieces in 2400 mm maximum lengths.
  - .1 Make allowance for expansion at joints.
- .3 Hem exposed edges on underside 12 mm.
  - .1 Mitre and seal corners with sealant.
- .4 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- .5 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

## **2.5 METAL FLASHINGS**

- .1 Form flashings, copings and fascias to profiles indicated of 26 gage galvanized steel prefinished.

## **2.6 PANS**

- .1 Form pans to receive roofing plastic from galvanized prefinished 26 gage steel sheet metal with minimum 75 mm upstand above finished roof and 100 mm continuous flanges with no open corners.
  - .1 Solder joints.
  - .2 Make pans minimum 50 mm wider than member passing through roof membrane.

## **2.7 REGLETS AND CAP FLASHINGS**

- .1 Form metal cap flashing of 26 gage sheet metal to be built-in as detailed.
  - .1 Provide slotted fixing holes and steel/plastic washer fasteners.
  - .2 Cover face and ends with plastic tape.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

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

### **3.2 INSTALLATION**

- .1 Install sheet metal work in accordance with as detailed.

- .2 Use concealed fastenings except where approved before installation.
- .3 Provide underlay under sheet metal.
  - .1 Secure in place and lap joints 100 mm.
- .4 Counterflash bituminous flashings at intersections of roof with vertical surfaces and curbs.
  - .1 Flash joints using S-lock forming tight fit over hook strips, as detailed.
- .5 Lock end joints and caulk with sealant.
- .6 Install surface mounted reglets true and level, and caulk top of reglet with sealant.
- .7 Insert metal flashing into reglets under cap flashing to form weather tight junction.
- .8 Turn top edge of flashing into recessed reglet or mortar joint minimum of 25 mm. Lead wedge flashing securely into joint.
- .9 Caulk flashing at reglet with sealant.
- .10 Install pans, where shown around items projecting through roof membrane.

### **3.3 FIELD QUALITY CONTROL**

- .1 Manufacturer's Field Services:
  - .1 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.

### **3.4 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 Leave work areas clean, free from grease, finger marks and stains.

**END OF SECTION**