
Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 05 50 00 – Metal Fabrications
- .2 Section 07 62 00 – Sheet Metal Flashing and Trim.

1.2 REFERENCE STANDARDS

- .1 American Society of Mechanical Engineers (ASME)
 - .1 ASME B18.6.3-2013, Machine Screws, Tapping Screws, and Metallic Drive Screws (Inch Series).
- .2 ASTM International
 - .1 ASTM A653/A653M-15e1, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM D2369-10–2015e1, Test Method for Volatile Content of Coatings.
 - .3 ASTM D2832-92 (2016), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
 - .4 ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.

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 metal siding 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 Newfoundland and Labrador, Canada.
 - .2 Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, and related work.

1.4 QUALITY ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Installer Qualifications: minimum three years documented experience with products specified.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance 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 in dry location and in accordance with manufacturer s recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect steel siding from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

1.6 SITE CONDITIONS

- .1 Execute work of this Section within environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer.

1.7 WARRANTY

- .1 Manufacturer's warranty: Submit, for Departmental Representative acceptance, manufacturer s standard warranty document executed by authorized company official. Manufacturer s warranty in addition to and not limit other rights Owner may have under Contract Documents.

Part 2 Products

2.1 MATERIALS

- .1 Steel siding: Fabricated from commercial grade to ASTM A653M with Z275 zinc coating:
 - .1 Profile: preformed interlocking joints, fastener holes pre-punched, vertical corrugated profile.
 - .2 Pattern: corrugated surface.
 - .3 Finish coating: factory precoated with modified silicone paint finish, 2 coat system dry paint film thickness of 0.025 mm.
 - .4 Colour: colour selected by Departmental Representative.
 - .5 Gloss: medium.
 - .6 Thickness: 0.65mm base metal minimum.
 - .7 Include expansion joints to accommodate movement of cladding to prevent permanent distortion.
- .2 Fasteners: screws to ASME B18.6.3, cadmium plated steel, coloured nylon head to match cladding. Skirt flange with neoprene washer.
- .3 Sealants:

- .1 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.
- .2 Concealed: Tape or compound, non-shrinking, non-drying, butyl rubber.
- .3 Exposed: One-part silicone to CAN 2-19.13.

2.2 ACCESSORIES

- .1 Exposed trim: inside corners, outside corners, cap strip, drip cap, undersill trim, starter strip and window/door trim of same material, gloss and colour as cladding, with fastener holes pre-punched.
- .2 Rubber opening closure covers: at operable gate opening, install two full-height natural rubber closure (end flaps) to provide minimal weather protection.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts acceptable 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 remedied and after approval to proceed from Departmental Representative

3.2 PREPARATION

- .1 Clean surfaces thoroughly prior to installation.
- .2 Repair substrate flaws or defects before applying siding or soffits.
- .3 Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under project conditions.

3.3 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.

3.4 INSTALLATION

- .1 Install steel siding in accordance with manufacturer s written instructions.
- .2 Install continuous starter strips, inside and outside corners, edgings, soffit, drip, cap, sill and window/door opening flashings as indicated.
- .3 Install outside corners, fillers and closure strips with carefully formed and profiled work.
- .4 Maintain joints in exterior cladding, true to line, tight fitting, hairline joints.
- .5 Attach components in manner not restricting thermal movement.

- .6 Caulk junctions with adjoining work with sealant, in accordance with manufacturer's instructions.
- .7 Install cladding to maintain maximum offset from true alignment between two adjacent members abutting end to end in line: 1mm.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 00 - 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 00 - Cleaning.
- .3 Repair and touch-up with colour matching, high grade enamel minor surface damages.

3.6 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by preformed metal siding installation.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 05 50 00 – Metal Fabrications.
- .2 Section 07 46 19 - Steel Siding.

1.2 REFERENCE STANDARDS

- .1 ASTM International (ASTM)
 - .1 ASTM A755/A755M-16e1 Standard Specification for Steel Sheet, Metallic coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
 - .2 ASTM D 523-14, Standard Test Method for Specular Gloss.
 - .3 ASTM D822-13(2018), Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-37.5-M89, Cutback Asphalt Plastic Cement

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer s printed product literature including product specifications and technical data sheets for sheet metal flashing fasteners and accessory materials. Include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Shop Drawings:
 - .1 Submit shop drawings for all sheet metal fabrications.
 - .2 Indicate sheet thickness, flashing dimensions and fastenings. Include anchorage, expansion joints and other provisions for thermal movement.
 - .3 Submit manufacturer’s catalogue cut sheets for manufactured items.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturers written instructions.
- .2 Handle and store flashing materials to prevent creasing, buckling, scratching, or other damage.

Part 2 Products

2.1 PREFINISHED STEEL SHEET

- .1 Prefinished steel with factory applied two-coat polyvinylidene fluoride resin on specified steel sheet substrate conforming to ASTM A755.

- .1 Finished one side with wash coat on back.
- .2 Colour selected by Departmental Representative from manufacturers full range.
- .3 Specular gloss: 30 units +/- 5 in accordance with ASTM D523.
- .4 Exposed coating thickness: dry film coating system thickness not less than 22 micrometres.
- .5 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.

2.2 ACCESSORIES

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Plastic cement: to CAN/CGSB 37.5
- .3 Sealants: Caulk junctions with sealants in accordance with manufacturer's instructions for metal siding.
- .4 Screws: of same material as sheet metal, Suitable for substrate and material being fastened, nylon coloured head, neoprene washer.
- .5 Touch-up paint: as recommended by prefinished material manufacturer.

2.3 FABRICATION

- .1 Fabricate sheet steel flashings and other sheet steel work 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.

2.4 METAL FLASHINGS

- .1 Form flashings, copings and caps to profiles indicated of 0.65mm thick prefinished steel.

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 Sub-grit framing system: install sub-grit and frame all openings in cladding.
- .2 Install starter strip flashing at base of claddings and top of all openings.
- .3 Install cladding in accordance with manufacturer's instructions providing laps to form a continuous barrier.
- .4 Install flashing and cap flashing.
- .5 Use exposed fasteners except when approved before installation.
- .6 Lock end joints and caulk with sealant.
- .7 Caulk flashing at cap flashing with sealant.

3.3 CLEANING

- .1 Clean exposed surface panels in accordance with manufacturer's instructions.
- .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.
- .4 Repair and touch up with colour matching high grade enamel minor surface damages.

END OF SECTION