

## **PART 1 GENERAL**

### **1.1 SUMMARY**

- .1 Provide labor, material, and equipment necessary for furnishing a complete installation of commercial gutter system.

### **1.2 SUBMITTALS**

- .1 Provide required submittals in accordance with Section 01 33 00 – Submittals.
- .2 Submit product data for each type of product specified. Submit manufacturer's detailed technical product data, installation instructions and recommendations, dimensions of individual components, profiles, and finishes
- .3 Shop Drawings shall show fabrication and installation of commercial gutter system including fully dimensioned roof plans, expansion joint locations, sections and details of components and other related trims.
- .4 Submit manufacturer's technical data for specified finish and color chart showing full range of colors available.

### **1.3 QUALITY ASSURANCE**

- .1 Obtain all components and related accessories from one single source manufacturer.
- .2 Follow manufacturer's printed instructions for installing commercial gutter system. Follow primary roofing manufacturer's printed instructions for installing associated roof material for flashing gutter system to roof.

### **1.4 DELIVERY, STORAGE & HANDLING**

- .1 Deliver, store and handle products in accordance with Section 01 61 00 – Common product requirements and manufacturer's instruction.
- .2 All products delivered shall be stored in a clean dry location prior to installation.
- .3 Products furnished with strippable protective masking shall not be exposed to direct sunlight for more than 30 minutes without removing masking.
- .4 Do not install finished materials with scars or abrasions.

## 1.5 PROJECT CONDITIONS

- .1 Coordinate work of this Section with adjoining work for proper sequencing to ensure protection from inclement weather and to protect materials and their finish against damage.
- .2 Do not install commercial gutter system during inclement weather. When installing in cold climates, warm adhesives, caulks, and primers to at least 50 degrees Fahrenheit prior to application.

## PART 2 PRODUCTS

### 2.1 MATERIALS & FABRICATION

- .1 Gutter: Shall be manufactured from 1.02 mm mill finished aluminum in 3050 mm lengths. 150 mm size. Profile as indicated on drawings. Gutter shall be:
  1. Manufactured with 25 mm telescoping and notched end.
  2. Factory punched with fastening holes elongated to allow for thermal movement.
  3. Gutters shall be press formed on a CNC Press to provide repeated true and accurate profiles.
- .2 Support Bracket: Shall be manufactured from 3.172 mm x 25 mm aluminum, factory punched for fasteners.
- .3 Interior Straps: Shall be manufactured from 3.172 mm x 25 aluminum.

### 2.2 ACCESSORIES

- .1 Mitered Corners: Miter shall be precision saw cut with a continuous heliarc weld watertight joint.
- .2 End Caps: Provide factory end caps at all gutter ends and wall abutments.
- .3 Liner Expansion Joint: Provide manufacturer's elastomeric expansion joints with cover plates at 12.2 m intervals.
- .4 Sealant: Shall be polyurethane or silicon based water-proofing type, compatible with aluminum gutter, downspout, and abutting dissimilar materials for intended application.
- .5 Splash pad: precast concrete splash pad located at each downspout to convey water away from building.
  - .1 Size: 311 mm x 610 mm
  - .2 Mass: 25 kg. Conforming to CSA A23.4.

### 2.3 DRAINWARE

- .1 Downspout & Elbows: Provide 100 mm x 100mm downspout in locations as indicated on drawings. Downspouts shall be manufactured from 1.02 aluminum, finished to match gutter. Downspout elbows shall have heliarc welded joints.
- .2 Outlets: At all downspout locations provide aluminum outlets to connect liner to downspout.
- .3 Wall Brackets: at 1525 mm maximum spacing (minimum 2 brackets). Brackets shall be manufactured from 3.172 mm x 25 aluminum, finished to match downspout.

## **2.4 FINISHES**

- .1 Apply coatings to exposed aluminum components after fabrication for maximum coating performance and to prevent crazing, abrasion, and damage to finished surfaces.
- .2 Pretreatment: Aluminum components shall be pretreated with solutions to remove organic and inorganic surface soils, remove residual oxides, followed by a chrome phosphate conversion coating to which organic coatings will firmly adhere.
- .3 Coating: High Performance Coating, two-coat, shop applied, 70% Polyvinylidene Fluoride (PVDF) coating, meeting AAMA 2605 specification.
- .4 Color: Select from manufacturer's full range of colours.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- .1 Examine substrates and conditions under which gutter system will be installed. All wood plates and/or fascia boards shall be installed true, straight, and free of splits, cracks, or other irregularities. Do not proceed with installation until unsatisfactory conditions are corrected.

### **3.2 PREPARATION**

- .1 Prior to the installation of the commercial gutter system, soffits, extenders, and associated cornice profiles shall be installed.

### **3.3 INSTALLATION**

- .1 The gutter system shall be installed in strict accordance with manufacturer's printed instructions.
- .2 Layout support brackets to provide 13 mm slope in 12200 mm. Install support brackets with #10 x 50 mm stainless steel wood screws.

- .3 Gutter: Install gutter onto support brackets and fasten to substrates with 38 mm aluminum or stainless steel nails. Rivet and seal liner joints with high grade exterior sealant as recommended by gutter manufacturer.
- .4 Expansion Joints: Install elastomeric expansion joints as shown on plans and/or shop drawings. Maximum expansion joint spacing shall be 12000 mm centers.
- .5 Install interior straps by fully engaging them into gutter's hemmed edge, complete by securely riveting.
- .6 Install splash pad at each downspout.

**END OF SECTION**