

SECTION 07 7123**MANUFACTURED GUTTERS AND DOWNSPOUTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and install gutters and downspouts as described in Contract Documents.
- B. Related Requirements:
 - 1. Section 07 9213: 'Elastomeric Joint Sealant', for quality of sealants for joints.

1.2 REFERENCES

- A. Reference Standard:
 - 1. Sheet Metal & Air Conditioning Contractors National Association Inc:
 - a. SMACNA Architectural Sheet Metal Manual, (7th edition 2012).

1.3 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings: Show gutter cross-section, mounting method, gauge of metal, expansion joint design and locations, and downspout locations minimum.

PART 2 - PRODUCTS**2.1 ASSEMBLIES**

- A. Manufacturers:
 - 1. Type Two Acceptable Manufacturers of Metal:
 - a. ATAS Aluminum Products, Allentown, PA www.atas.com.
 - b. CMG – Coated Metals Group, Denver, CO www.cmgmetals.com.
 - c. Fabral, Jackson, GA www.fabral.com.
 - d. Firestone Metal Products, Anoka, MN www.unaclad.com.
 - e. MBCI, Houston, TX www.mbc.com.
 - f. Metal Sales Manufacturing Corp, Sellersburg, IN www.mtlsales.com.
 - g. O'Neal Flat Rolled Metals (member of O'Neal Industries), Brighton, CO www.ofrmetals.com.
 - h. Petersen Aluminum Corp, Elk Grove, IL www.pac-clad.com.
 - i. Reynolds Metals Company, Richmond, VA www.rmc.com.
 - j. Ryerson, Chicago, IL www.ryerson.com.
 - k. Equal as approved by Architect before installation. See Section 01 6200.
- B. Materials
 - 1. Aluminum:
 - a. Downspouts: Rectangular **0.032 inch (0.813 mm)** minimum aluminum including necessary elbows.
 - b. Gutters: **0.04 inch (1.0 mm)** minimum aluminum.
 - c. Brackets: **0.06 inch (1.52 mm)** minimum aluminum.

2. Screws, Bolts, Nails, And Accessory Fasteners: Non-corrosive and of strength and type consistent with function.
 3. Downspouts, gutters, brackets, fasteners, and accessories shall be compatible material.
- C. Fabrication:
1. Fabricate in accordance with SMACNA Architectural Manual recommendations, where applicable.
 2. Cross-sectional configuration of gutter to match existing.
 3. Form accurately to details.
 4. Profiles, bends, and intersections shall be even and true to line.
- D. Finishes:
1. Metal exposed to view shall have face coating of polyvinylidene Fluoride (PVF₂) Resin-base finish (Kynar 500 or Hylar 5000) containing seventy (70) percent minimum PVF₂ in resin portion of formula.
 - a. Thermo-cured two (2) coat system consisting of corrosion inhibiting epoxy primer and top coat factory applied over properly pre-treated metal.
 - b. Reverse side coating shall be thermo-cured system consisting of corrosion inhibiting epoxy primer applied over properly pre-treated metal.
 2. Color as selected by Architect from Manufacturer's standard colors.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection Of In-Place Conditions:
1. Before starting work, verify governing dimensions at building. Inspect for conditions that would prevent installation of specified system. Do not install over improper conditions.
 2. Insulate work from fascia as necessary to prevent electrolytic action.

3.2 INSTALLATION

- A. Allow no more than **40 feet (12 meters)** between downspouts. Lap joints in downspouts **1-1/2 inches (38 mm)** minimum in direction of water flow.
- B. Furnish and install outlet tubes and gutter ends where required. Furnish and install expansion joints in runs exceeding **50 feet (15 meters)** and in runs that are restrained at both ends. Lap other joints in gutter **one inch (25 mm)** minimum, apply sealant in lap, and stainless steel rivet **one inch (25 mm)** on center maximum.

3.3 FIELD QUALITY CONTROL

- A. Field Tests:
1. At completion of this work, block downspouts and flood gutters.
 2. Notify Architect two (2) working days before testing.
 3. Repair leaks and adjust for proper drainage.

3.4 CLEANING

- A. Leave metals clean and free of defects, stains, and damaged finish.

END OF SECTION