

**ARCHITECTURE**

**SECTION 07620**

**SHEET METAL FLASHING AND TRIM**

**PART 1 - GENERAL**

1.1. SECTION INCLUDES

- A. Roof eave – copper and lead coated copper
- B. Counterflashings at edge of roofing – lead coated copper.
- C. Wall flashings.
- D. Canopy Flashing – Clear anodized aluminum

1.2. SUBMITTALS

- A. Submit samples of all items for Architects approval of colors and shapes.

1.3. QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in sheet metal flashing work with 3-years minimum experience in similar sized installations.
- B. Copper Sheet Metal Standard: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

1.4. DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, handle and protect products under provisions of Section 01010 - Project Summary and General Requirements.
- B. Stack pre-formed material to prevent twisting, bending, and abrasions, and to provide ventilation.
- C. Prevent contact with materials, which may cause discoloration or staining.
- D. Ship pre-coated products with strippable covering.

1.5. WARRANTY

- A. Provide warranties.
- B. Provide water tightness guarantee beginning at Completion including repair or replacement of defective materials and workmanship.
  - 1. Warranty period: Two (2) years from date of Completion.

**PART 2 - PRODUCTS**

2.1 PRODUCTS AND MANUFACTURERS - SHEET MATERIALS

- A. Galvanized Steel (concealed counter flashings): ASTM A525, G90 coating, hot-dipped galvanized both sides flattened sheets, chemically treated, gage as recommended in Architectural Sheet Metal Manual for intended purposes (but no less than 26-gage), as manufactured by Bethlehem Steel, or approved equal.
- B. Copper Sheet (roof edge drip flashing, and roof/wall flashing at copper wall panels): ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.
  - 1. Non-Patinated Exposed Finish: Mill.
- C. Lead Coated Copper (roof edge drip flashing, and roof/wall flashing) ASTM B101, Temper H00 and H01, cold-rolled copper sheet, of weight (thickness) indicated below, coated both sides with lead weighing not less than 12 lb/100 sq.ft. (0.59 kg/sq. m) nor more than 15 lb/100 sq.ft. (0.73 kg/sq. m) of copper sheet (total weight of lead applied equally to both sides).

**ARCHITECTURE**

D. Aluminum (for roof edge drip flashing, and roof/wall flashing at aluminum storefront) ASTM B209, 5005 alloy, temper as required for intended application (15 ksi minimum), thickness as recommended in Specifications for Aluminum Sheet Metal Work in Building Construction for intended purposes, manufacturer at Contractor's option, pre-finished clear anodized to match storefront system. Sealant: One part, non-sag polyurethane.

E. Minimum gauges for sheet metal flashings, gravel stops, copings, etc.

Dimension (inches)	Galv steel (Gauge)(oz)	Copper/LCC (Inches)	Aluminum (Gauge)	S/S
4	24	16	0.025	26
5	24	16	0.032	26
6	22	20	0.040	24
7	22	20	0.040	22
8	20	20	0.050	20

**2.2. FABRICATION**

- A. Form sections true to shape, accurate in size, square, free from distortion and defects, to profiles indicated in accordance with SMACNA Architectural Sheet Metal Manual.
- B. Form pieces in longest practical lengths.
- C. Hem exposed flashings on underside 1/2-inch; miter and seam corners.
- D. Form materials, which are typically concealed from view by the public with lap seams.
- E. Solder and seal metal joints at balconies and door openings of upper floors, except those indicated or required to be expansive type joints. After soldering, remove flux. Wipe and wash solder joints clean.
- F. Fabricate corners from one place with minimum 18-inch long legs; solder for rigidity or seal with sealant if approved by Architect.
- G. Fabricate vertical faces with bottom edge formed outward 1/8-inch and hemmed to form drip.
- H. Fabricate flashings to allow toe to extend minimum 2-inches over wall surfaces.
- I. Fabricate as much as possible in shop with machinery to eliminate as much hand tooling on the job as possible. Shop fabricates to allow for adjustments in the field for proper anchoring and joining.

**2.3. ACCESSORIES**

- A. Fasteners:
  - 1. Nails: AISI Series 300 for stainless and galvanized steel; aluminum for aluminum sheets. Use annular ring shank type, No. 12 gage or larger to suit application, of sufficient length to penetrate backing material at least 7/8-inch.
  - 2. Screws and Bolts: AISI Series 300 for stainless and galvanized steel; and aluminum for aluminum sheets; of sufficient size and length to sustain imposed stresses.
- B. Solder Materials:
  - 1. Flux: Type as recommended by sheet material manufacturer; not detrimental to base material. Use resin type flux for terne metal.
  - 2. Solder: ASTM B32 type, 50% tin/50% lead for plain copper, galvanized steel and terne metal.
- C. Protective Back Paint: Zinc chromate alkyd.
- D. Sealants: One component polyurethane, non-sagging, sealant as specified in Section 07920–Joint Sealants.

**ARCHITECTURE**

- E. Plastic Cement: FSS SS-C-153, Bituminous plastic cement.

**PART 3 - EXECUTION**

3.1. EXAMINATION

- A. Verify that surfaces and conditions are ready to receive work of this Section. Notify General Contractor of any existing conditions, which will adversely affect execution. Beginning of execution will constitute acceptance of existing conditions.
- B. Verify roof openings, pipes, sleeves, ducts, and vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- C. Verify membrane termination and base flashings are in place, sealed, and secure.

3.2. PREPARATION

- A. Field measure site conditions prior to fabricating work.

3.3. INSTALLATION

- A. Install using skilled workmen in accordance with manufacturer's printed instructions and recommendations.
- B. Conform to drawing details included in manuals published by AA and NRCA.
- C. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations approved by Architect.
- D. Lap roof eave flashings 4-inches and seal all joints.
- E. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- F. Seal metal joints watertight at gutters and downspouts.
- G. Provide electrolytic separation between dissimilar metals with protective back paint.
- H. On soldered metal joints, make watertight for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.
- I. Install expansion joints at frequency as recommended in SMACNA Architectural Sheet Metal Manual. Do not fasten seams such that movement is restricted. Coordinate E.J. locations with joints in adjacent materials.
- J. If approved by Architect, as an alternate to soldered joints, sheet metal joints may be lapped 6-inches and a double bead of sealant used to seal joint watertight. Soldered joints must be maintained, however, at all formed corners, column wraps, and sill pockets for wall openings.

3.4. QUALITY CONTROL

- A. Install surfaces flat such that from normal viewing distances, no waviness or oil canning is visible.

3.5. CLEANING

- A. Perform final cleaning.

3.6. PROTECTION

- A. Protect finished installation.

**END OF SECTION**