

SECTION 07622

COPPER FLASHING AND TRIM

PART GENERAL

SECTION INCLUDES

Shop and field formed copper roofing accessories and trim, including:

- Counterflashing and base flashing.
- Wall flashing and expansion joints.
- Built-in valleys, gutters, and scuppers.
- Gutters and downspouts (rain drainage).
- Exposed trim/fascia units.
- Miscellaneous accessories.
- Laminated flashing.

RELATED SECTIONS

Section 04810 - Unit Masonry Assemblies: Integral masonry flashings.

Section 05810 - Expansion Joint Cover Assemblies: Copper expansion joints.

Section 07612 - Sheet Copper Roofing.

Section 07712 - Copper Roof Accessories: Roof accessory units of premanufactured, set-on type.

Section 07900 - Joint Sealers.

REFERENCES

ASTM B 32 - Standard Specification for Solder Metal.

ASTM B 101 - Standard Specification for Lead-Coated Copper Sheet and Strip for Building Construction.

ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.

ASTM D 2822 - Standard Specification for Asphalt Roof Cement.

CDA 4115-1929 - Copper in Architecture - Handbook;

Copper Development Association (CDA).

SUBMITTALS

Submit in accordance with Section 01300.

Product Data: Submit manufacturer's technical product data, installation instructions and general recommendations for each specified sheet material and fabricated product.

Samples: 6 or 12-inch-square samples of specified sheet materials to be exposed as finished surfaces.

Samples: 6 or 12-inch-long samples of factory-fabricated products exposed as finished work, including specified factory finish.

Shop Drawings: Submit layout, profiles, methods of joining, and anchorage details, including major counterflashings, trim/fascia units, gutters, downspouts, scuppers, and expansion joint systems. Provide layouts at 1/4-inch scale and details at 3-inch scale.

QUALITY ASSURANCE

Installer: A firm with 3 years of successful experience with installation of copper flashing and trim similar in type and scope to project requirements.

Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

PART PRODUCTS

FLASHING AND TRIM MATERIALS

Copper: ASTM B 370; temper H00 (cold-rolled) except where temper 060 is required for forming; 16 oz. (0.0216-inch thick) except as otherwise indicated.

Provide lead coating in accordance with ASTM B 101 on exposed copper surfaces.

LAMINATED COMPOSITION SHEET FLASHING

Copper/Paper Flashing: 3-oz. copper sheet laminated between 2 sheets of bituminous impregnated creped Kraft paper or saturated fabric.

Provide one of the following products:

Afco Products, Inc.; "Cop-A-Bond Duplex."

Phoenix Building Products, Inc.; "Duplex Cop-R Flash."

York Manufacturing, Inc.; "Cop-R-Tex Duplex."

Miscellaneous Materials and Accessories:

Solder: Provide 50 - 50 tin/lead solder (ASTM B 32), with rosin flux.

Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.

Bituminous Coating: SSPC - Paint 12, solvent-type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.

Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, non-drying, nonmigrating sealant.

Elastomeric Sealant: Generic type recommended by manufacturer of metal and fabricator of components being sealed and complying with requirements for joint sealants as specified in Section 07900 - Joint Sealers.

Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by metal manufacturer for exterior/interior nonmoving joints including riveted joints.

Adhesives: Type recommended by flashing sheet manufacturer for waterproof/weather-resistant seaming and adhesive application of flashing sheet.

Roofing felt: asphalt or coal tar saturated felt weighing not less than 30 lbs per 100 square feet.

Paper Slip Sheet: 4 to 6-lb. rosin-sized building paper.

Reglets: Units of type and profile indicated, compatible with copper, noncorrosive.

Metal Accessories: Provide clips, straps, anchoring devices, and similar accessory units as required for installation of work, noncorrosive, size and gauge required for performance.

Gutter and Conductor-Head Guards: 20-gage bronze mesh or fabricated units, with selvaged edges and

noncorrosive fasteners.

Roofing Cement: ASTM D 2822, asphaltic.

FABRICATED UNITS

Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of CDA "Copper in Architecture - Handbook" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance, with expansion provisions for running work sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed copper work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.

Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder. Rivet joints for additional strength where required.

Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

Sealant Joints: Where movable, nonexpansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with CDA standards.

Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.

ELASTIC EXPANSION JOINTS

General: Provide factory-fabricated units of size and profile indicated, complete with prefabricated corner units, intersection units, and splicing materials. Provide complete with elastic sheet flashing forming the primary joint membrane, in a supported, "bellows"

arrangement designed for securement to both sides of expansion joints. Underside of bellows insulated with adhesively applied, flexible, closed-cell rubber or plastic not less than 3/8-inch thick.

Type: Encapsulated copper flanged edges, for embedment in other construction or nailing to substrates, 4-inches maximum flange width.

Type: Copper flanged edges, 3 to 4 inches wide, formed to profiles as indicated to fit curbs and designed for nailing to curb substrate. Provide 16 oz. metal flanges.

Looped Bellows Width: 5 to 6 inches, exclusive of flanges.

Manufacturers: Provide products that comply with project requirements and that are made by one of the following:

- Afco Products, Inc.
- Celotex Corporation
- International Permalite/Roofing Components Group.
- Manville/Roofing Systems Division.
- Phoenix Building Products, Inc.
- York Manufacturing, Inc.

PART EXECUTION

INSTALLATION

General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations and with CDA "Copper in Architecture - Handbook."

Anchor units of work securely in place by methods indicated, providing for thermal expansion of units; conceal fasteners where possible, and set units true to line and level as indicated.

Install work with laps, joints, and seams that will be permanently watertight and weatherproof.

Underlayment: Where installation is to be directly on cementitious or wood substrates, install a slip sheet of red rosin paper on a course of asphalt saturated felt.

Bed flanges of work in a thick coat of bituminous

roofing cement where required for waterproof performance.

Install reglets to receive counterflashing in manner and by methods indicated. Where shown in concrete, furnish reglets to trades of concrete work for installation. Where shown in masonry, furnish reglets to trades of masonry work for installation.

Install counterflashing in reglets, either by snap-in seal arrangement or by soldering in place for anchorage and filling reglet with mastic or elastomeric sealant, as indicated and depending on degree of sealant exposure.

Install elastic flashing in accordance with manufacturer's recommendations. Where required, provide for movement at joints by forming loops or bellows in width of flashing. Locate cover or filler strips at joints to facilitate complete drainage of water from flashing. Seam adjacent flashing sheets with adhesive, seal and anchor edges in accordance with manufacturer's recommendations.

Nail flanges of expansion joint units to curb nailers, at maximum spacing of 6 inches o.c. Fabricate seams at joints between units with minimum 3-inch overlap, to form a continuous, waterproof system.

Install continuous gutter guards on gutters, arranged as hinged units to swing open for cleaning gutters. Install "beehive"-type strainer-guard at conductor heads, removable for cleaning downspouts.

CLEANING AND PROTECTION

Clean exposed copper surfaces, removing substances that might cause discoloration of metal.

Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

END OF SECTION