

SECTION 07700 - ROOF SPECIALTIES AND ACCESSORIES

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Work under this section is subject to requirements of the Contract Documents including the General Conditions and Supplementary Conditions and applicable portions of Division 1 - General Requirements.
- B. The work consists of all labor, material and equipment necessary and required to complete all roof specialties and accessories as shown on the drawings and specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

- A. Flashing and Sheet Metal: Section 07600.
- B. Joint Sealers: Section 07900.
- C. Painting: Section 09900.

1.03 SUBMITTALS:

- A. Manufacturer's Data: Submit copies of manufacturer's specifications and installation instructions for each type of roof accessory required. Include certification to show that the materials comply with specified requirements.
- B. Shop Drawings: Submit shop drawings for the fabrication and installation of roof accessories. Show jointing, finishes, insulation, hardware, accessories, installation and anchorage methods.
- C. Coordination Drawings: Submit coordination drawings for items interfacing with or supporting mechanical or electrical equipment, ductwork, piping or conduit. Indicate dimensions and locations of items provided under this section, together with relationships and methods of attachment to adjacent construction and to mechanical or electrical items.

1.04 JOB CONDITIONS:

- A. Coordinate the installation of roof accessories with roof insulation, roofing and flashing, so that the best possible integration of courses and flanges is achieved for permanent, waterproof construction.

1.05 QUALITY ASSURANCE:

- A. Standards: Comply with SMACNA "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap-flashing to coordinate with type of roofing indicated. Comply with "NRCA Roofing and Waterproofing Manual" details for installation of units.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Zinc Coated Steel: Commercial quality with 0.20 percent copper content comply with ASTM A 526, hot dip galvanized to comply with ASTM A 525, 1.25 commercial class, mill phosphatized.
- B. Wood Nailers: Softwood lumber, pressure treated with water-borne preservatives for above

ground use, complying with AWPB LP-2, not less than 1-1/2 inches thick.

- C. Fasteners: Same metal as metals being fastened, or non-magnetic stainless steel or other non-corrosive metal as recommended by manufacturer. Match finish of exposed fasteners with finish of material being finished.
- D. Bituminous Coating: FS TT-C-494 or SSPC-Paint-12, solvent type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coating.
- E. Mastic Sealant: Polyisobutylene, non-hardening, non-skinning, non-drying, non-migrating sealant.
- F. Elastomeric Sealant: Type recommended by unit manufacturer, which is compatible with joint surfaces; comply with FS TT-S-0027, TT-S-00230 or TT-S-001543.
- G. Roofing Cement: ASTM D 2822, asphaltic.
- H. Gaskets: Tubular or fingered design of neoprene or polyvinyl chloride or block design of sponge neoprene.
- I. Insulation: Rigid or semi-rigid board of glass fiber.

2.02 ACCESSORIES:

- A. Roof Walkway Pads: Shall be provided where shown at roof, shall be 30 inches by 30 inches in size by .300 inch thick; shall be pre-formed boards; shall be Firestone Building Products Co. Boards shall be placed 3 inches apart.
- B. Roof Hatch: Shall be of sizes shown; shall be single-leaf type unless otherwise indicated; shall be fabricated for 40 pounds per square foot external load. Hatch shall be fabricated of minimum 14 gauge galvanized sheet steel for liner, all with manufacturer's standard prime finish. Integral curb shall be 12 inches high, insulated; shall have 3 inches minimum pre-drilled mounting flange; shall have counter-flashing of ample size to receive roofing and roof flashing and provide effective weather protection. Cover shall be insulated and shall be complete with all hardware and accessories required for proper operation.
 - 1. Units shall be manufactured by The Bilco Co., or Babcock-Davis or Milcor, Inc.
- C. Expansion Joints: Units shall be complete with cap flashing (roofing counter flashing) 26 gauge minimum galvanized steel, and waterproof bellow of 30-60 mil elastic flashing sheet of neoprene, EPDM, butyl rubber, or chlorinated polyethylene; filled with blanket of mineral fiber insulation and concealed under cap to form a waterproof, air-tight, insulated expansion joint system. Provide units of manufacturer's standard lengths, in styles required for roof-to-roof, roof-to-wall and vertical outside corner applications as indicated; complete with pre-fabricated corner and intersection units as required; equipped with special field splice provisions to ensure permanent continuous waterproof installation of expansion joint system.
 - 1. Units shall be manufactured by Afco Industries, Inc., or York Manufacturing, Inc.
- D. Prefabricated Curbs and Equipment Supports: Comply with loading and strength requirements as indicated where units support other work. Coordinate dimensions with rough-in sheets or shop drawings of equipment to be supported. Fabricate of structural quality sheet steel ASTM A 570, grade as required, which has been prepared for painting and factory primed and painted with 2 mil thickness of baked-on synthetic enamel after fabrication.
 - 1. Fabricate with welded or sealed mechanical corner joints. Provide complete with cant strips and base profile coordinated with roof insulation thickness. Provide preservative treated wood nailers at tops of curbs, coordinate with thickness of insulation and roof flashing as indicated, tapered as necessary to compensate for roof deck slopes of 1/4 inch per foot and less.
 - 2. Except as otherwise indicated or required for strength, fabricate units of minimum

- 14 gauge metal and to minimum height of 12 inches.
3. Sloping Roofs: Where slope of roof deck exceeds 1/4 inch per foot, fabricate curb/support units with height tapered to match slope, to result in level installation of tops and units.
 4. Manufacturer: Subject to compliance with requirements, provide prefabricated curbs/equipment supports by the following:
 - a. ThyCurb Div./ThyBar Corp.
- E. Prefabricate Aluminum Copings, Fascia Panels and Gravel Stops: Shall be of sizes and shapes indicated on drawings. Provide units of manufacturer's standard lengths, complete with prefabricated corner and intersection units; provide provisions for expansion and contraction in running work.
1. Aluminum: Aluminum extrusions shall be of alloy and temper recommended by manufacturer for strength, corrosion resistance and application of required finish, but not less than 22,000 psi ultimate tensile strength and not less than 0.062 inch thickness at any location. Comply with ASTM B 221. Aluminum sheet shall be of alloy and temper best suited for application and finish shown and specified.
 2. Fasteners: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum members, trim, anchors and other components of units.
 - a. Reinforcement: Where fasteners screw anchor into aluminum less than 0.125 inch thick, reinforce interior with aluminum or non-magnetic stainless steel to receive screw threads, or provide standard non-corrosive pressed-in splinted grommet nuts.
 - b. Do not use exposed fasteners except where unavoidable. Match finish of adjoining metal.
 3. Finish: All exposed-to-view aluminum shall be given the following:
 - a. High Performance Coating: AA-C12-C42-R1x, fluorocarbon coating, inhibitive thermo-cured primer, 0.2 mil minimum dry film thickness and thermo-cured fluorocarbon coating containing 70 percent Kynar 500 resin, 1.0 mil minimum dry film thickness. Provide color samples for Architect's approval.
 - b. Unexposed surfaces shall have 0.2 mil primer with 0.1 mil backer coat fluorocarbon coating containing Kynar 500 resin, white.
 4. Manufacturer: Subject to compliance with requirements, provide prefabricated aluminum copings, fascia panels and gravel stops by one of the following:
 - a. Cheney Flashing Co.
 - b. W.P. Hickman Co., Inc.
 - c. MM Systems Corp.
 - d. Architectural Products Co., Inc.
- F. Splash Blocks: Provide precast concrete splash blocks, of sizes indicated, under each downspout discharging onto roof. Set splash block in bituminous plastic cement.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. General: Comply with manufacturer's instructions and recommendations and approved shop drawings. Coordinate with installation of roof deck and other substrates to receive accessory units and with vapor barriers, roof insulation, roofing and flashing, as required to ensure that each element of the work performs properly and that combined elements are waterproof and weather-tight. Anchor units securely to supporting substrates.
 - B. Isolation: Where metal surfaces of units are to be installed in contact with non-compatible metal or corrosive substrates, including wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation.
 - C. Flange Seals: Except as otherwise indicated, set flanges of units in a thick bed of roofing cement, to form a seal.
 - D. Cap Flashing: Where cap flashing is required, install to provide adequate waterproof overlap with roofing or roof flashing as counter flashing. Seal with thick bead of mastic sealant.
 - E. Operational Units: Test operate units with operable components. Clean and lubricate joints and hardware. Adjust for proper operation.
- 3.02 CLEANING AND PROTECTION:
- A. Clean exposed metal surfaces in accordance with manufacturer' instructions. Touch up damaged metal coatings.
 - B. Installer shall advise Contractor of required procedures for surveillance and protection of roof accessories so that units will be without damage or deterioration, other than normal weathering, at time of substantial completion.

END OF SECTION 07700