

SECTION 23 33 10 - ROOF CURBS, EQUIPMENT SUPPORTS AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Roof curbs for duct penetrations.
  - 2. Equipment support curbs for ducts, piping, and equipment.
  - 3. Piping roof penetration systems.

1.3 SUBMITTALS

- A. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

1.4 QUALITY ASSURANCE

- A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing system to provide a weather-tight, secure, and non-corrosive installation.

## PART 2 - PRODUCTS

### 2.1 ROOF CURBS

- A. Roof curbs for all roof-mounted air handling equipment and fans shall be provided by the manufacturer. See associated specification sections for information.
- B. Provide roof curbs for duct penetrations through the roof: prefabricated galvanized steel roof curbs fabricated from minimum 16-gauge steel with welded corners. Curbs to be internally reinforced, factory insulated with 1.5" thick 3 lb. density fiberboard insulation. Where required provide curbs with wood nailers.
  - 1. Manufacturers:
    - a. Custom Curb, Inc.
    - b. Pate Company (The).
    - c. Roof Products & Systems Corporation.
    - d. Roof Products, Inc.
  - 2. Refer to drawing details for the type of curb required for the specified roofing system. Furnish curbs with an integral metal cant, stepped integral metal cant raised the thickness of roof insulation or no integral cant, as required to suit the details. Provide curbs to meet the installed curb height as detailed on the drawings. Fabricate roof curbs to match the roof slope so that the top of the curb is level.
- C. Accessories: In addition to a roof curb, provide the following for all piping penetrations through the roof:
  - 1. Pipe portal curb cover furnished with a laminated acrylic coated ABS plastic curb cover with pre-punched holes and molded sealing ring on a collared opening, and an EPDM compression molded cap with stainless steel snap lock clamps. Curbs covers shall be resistant to ozone and ultraviolet rays and shall have a serviceable temperature range of -40 degrees F to positive 250 degrees F. The molded sealing ring on the collared opening and the groove in the rubber cap shall be installed to assure a weather-tight pressure and mechanical seal. The protective rubber caps shall have a serviceable temperature range of -60 degrees F to positive 250 degrees F and shall be resistant to ozone and ultraviolet rays. The conical shaped steps of the nipple shall provide a weatherproof seal around the penetration. The stainless-steel snap lock clamps shall provide added protection to guarantee the seal.

### 2.2 EQUIPMENT / DUCT SUPPORTS CURBS

- A. Provide prefabricated equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate from minimum 18-gauge galvanized steel with all welded construction. Provide factory installed wood nailer base plate and counter flashing.
- B. Refer to drawing details for the type of curb required for the specified roofing system. Furnish curbs with an integral metal cant, stepped integral metal cant raised the thickness of roof insulation or no integral cant, as required to suit the details. Furnish curbs to meet the installed curb height as detailed on the drawings. Fabricate roof support curbs to match the roof slope so that the top of the curb is level.
  - 1. Manufacturer:
    - a. Thybar.
    - b. Custom Curb, Inc.

- c. Pate Company (The).
- d. Roof Products & Systems Corporation.

## 2.3 PIPE PORTAL CURBS

- A. Provide pre-manufactured Pipe Portal flashing systems as manufactured by Roof Products & Systems, or equal, at all roof penetrations for piping. Each Pipe Portal flashing system shall include an RPS pre-manufactured roof curb, flashing system cover(s), and molded EPDM rubber cap(s) with stainless steel clamp(s). EPDM rubber shall have a serviceable temperature range of -60°F to +270°F and be resistant to ozone and ultraviolet rays.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and conditions to verify actual locations, dimensions, and other conditions affecting performance of work. Verify dimensions and locations of roof openings for roof accessories. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Roof curbs: furnish and install a roof curb for all duct and piping penetrations. Install the ductwork and / or piping through the roof curb immediately after the curb is installed, providing a water tight installation. If immediate installation is not performed provide temporary watertight covering, for all curb openings, consisting of minimum 3/4" exterior grade plywood and watertight rubber or plastic cover.
- B. Install roof accessories according to manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.
- C. Install roof accessories to fit substrates and to result in watertight performance.
- D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
- E. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.

END OF SECTION 23 33 10