

SECTION 07721 - MANUFACTURED CURBS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured non-structural metal roof curbs furnished and installed by Contractor.
2. Coordination with manufacturers and suppliers of roof mounted items and equipment.

B. Related Requirements:

1. Section 07530 - Elastomeric Membrane Roofing: Board insulation for roof curbs.
2. Section 07620 - Sheet Metal Flashing Trim: Sheet metal flashing installed in conjunction with roof penetration curbs.
3. Section 15600 - Refrigeration Systems.
4. Section 15700 - Heating, Ventilating and Air Conditioning Equipment.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.

B. American Welding Society (AWS): AWS D1.1 - Structural Welding Code.

C. ASTM International (ASTM):

1. ASTM A 463 - Specification for Steel Sheet, Cold Rolled, Aluminum Coated Type 1 and Type 2.
2. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
3. ASTM A 792 - Specification for Steel Sheet, Fifty-Five Percent Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

D. Steel Structures Painting Council (SSPC):

1. SSPC-Paint 20 Zinc Rich Coating Type I - Inorganic and Organic.

1.3 DEFINITIONS

A. Structural Roof Curb: Manufactured square or rectangular roof curb, bearing on structural steel joists or headers, designed to support equipment dead load and roof dead and live loads.

B. Non-Structural Roof Curb:

1. Deck Penetrations - 10 Inches by 10 Inches or Less: Manufactured square or rectangular roof curb, bearing on top of metal roof deck, designed to receive sheet metal flashing skirt, not used for support of equipment.
2. Deck Penetrations - Greater Than 10 Inches by 10 Inches: Manufactured square or rectangular roof curb bearing on structural steel angle frame, designed to support equipment dead load. Roof dead and live load supported by structural angle frame.

1.4 QUALITY ASSURANCE

A. Qualifications for Welding Work: Qualify field welding operators in accordance with AWS Standard Qualification Procedures. Provide certification that field welders have satisfactorily passed AWS qualification tests within previous 12 months.

1. If recertification of welders is required, provide without additional cost to Walmart.

B. Structural Curbs: Provide manufactured metal roof curbs designed by a licensed engineer. Meet or exceed Live

Loads and Dead Loads as specified in this Section and as indicated on Drawings. Coordinate curb dimensions with shop drawings of equipment to be supported.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600 and manufacturer's recommendations. Receive Owner Furnished products in accordance with the requirements of Section 01600.
- B. Ship curbs to site palletized and banded.
- C. Curb manufacturer shall furnish Curb Schedule to Contractor identifying curb "Type" and roof penetration for which curb is to be used. Curb Schedule shall identify identical curbs as single "Type" (i.e. Type A - 10 ton RTU's, Type B - 5 ton RTU's, etc.). Identify each curb with "Type" designation painted in 1 inch high letters on outside face of curb.
- D. Stack curbs at site to prevent twisting, bending or permanent deformation.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Non-Structural Roof Curbs: Subject to compliance with project requirements, provide prefabricated metal roof curbs manufactured by one of the following:
 - 1. AES Industries, Tallassee, AL, Contact: Chad Burt (800) 786-0402.

2.2 MATERIALS

- A. Sheet Steel: One of the following at Contractor's option:
 - 1. Galvanized Steel Sheet: ASTM A 653, SS (Structural Steel) Classification, Grade 33, G60 hot-dip zinc coating.
 - 2. Aluminum-Coated Steel Sheet: ASTM A 463, SS (Structural Steel) Classification, Grade 33, Type 2, T2 100 aluminum coating.
 - 3. Aluminum Zinc Alloy-Coated Steel Sheet (GAVALUME): ASTM A 792, AZ55 aluminum zinc alloy coating.
- B. Board Insulation: Specified in Section 07511, 07530, or 07550 as applicable.
- C. Wood Nailers: CCA Pressure Treated Lumber Type C, "Standard" grade lumber of any species.
- D. Zinc-Rich Primer: SSPC-Paint 20 Type II.
- E. Deck Support Clip: Galvanized steel sheet, gauge as shown.

2.3 NON-STRUCTURAL ROOF CURBS (CONTRACTOR FURNISHED AND INSTALLED)

- A. Coated 18 gauge steel sheet curb sections, corners fully mitered and welded; 2 inch by 4 inch (nominal dimension) pressure treated continuous wood nailers mechanically fastened at 12 inches on center to exterior face of curb. Shop prime welded connections with zinc-rich paint complying with SSPC-Paint 20. Profile and dimensions shall be as shown.
 - 1. Web Height: Comply with local code requirements for minimum curb height, but in no case shall curb height be less than 18 inches for deck penetrations greater than 10 inches by 10 inches and not less than 14 inches for deck penetrations 10 inches by 10 inches or less as measured from top of steel roof deck to top of curb, nor shall curb height be less than 8 inches as measured from top of roof membrane to top of curb.

2.4 SUBSTITUTIONS

- A. Comply with the requirements of Section 01600.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install curbs in accordance with manufacturer's instructions and as indicated on Drawings. Coordinate installation with roof membrane installation requirements specified under other Sections.
- B. Roof Curbs Bearing on Steel Angles, Joists, and Headers:
 - 1. Set units in place and secure base to roof structure by welding to top chord of structural member or as otherwise indicated on Drawings.
 - 2. Secure metal deck to perimeter of curb as indicated on Drawings.
- C. Roof Curbs Bearing on Roof Deck:
 - 1. Set units in place and secure base to steel roof deck by self-tapping screw fasteners spaced at a maximum of 12 inches on center, staggered.
- D. Install wind/seismic restraint brackets prior to installation of rooftop equipment in accordance with manufacturer's recommendations.

3.2 COORDINATION

- A. Coordinate project requirements for custom adapting and connecting to roof curbs with manufacturers and suppliers of curb mounted items and equipment.

3.3 NON-STRUCTURAL ROOF CURB SCHEDULE

- A. Provide non-structural roof curbs for the following items:
 - 1. Exhaust fans, unless otherwise shown to be provided by others.

END OF SECTION