

Rooftop METALWALK® Specifications

Section 07 7246 "Roof Walkways"

PART 1 GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:

1. Rooftop Walkway System consisting of Non-Slip, Interlocking grating planks with support plates and attachment clamps to mount to a Standing Seam Panel or Rib Panel metal roof. Optional Guard Rail system consisting of a horizontal top rail at 42" High and mid-rail at 21" High, assembled with structural slip-on pipe fittings, vertical posts 6'-0" typical on center and attached to Railing Support Plates. Designed to meet OSHA requirements of 200 lb lateral load. Optional LEVEL surface up to 6:12 pitch is available for perpendicular runs of METALWALK® system. All parallel runs follow the slope.

B. RELATED SECTIONS:

1. Division 1: Administrative, procedural, and temporary work requirements.
2. Section 05 5136 - Metal Catwalks & Walkways
3. Section 05 5213 - Pipe and Tube Railings
4. Section 13 120 - Pre-Engineered Structures.

1.2 REFERENCES

- A. ASTM A653 Std Specification for Steel sheet, Zinc coated (Galvanized) by hot-dip process, commercial quality.
- B. ASTM A792 Std Specification for Steel sheet, Aluminum-Zinc (Galvalume) alloy coated by the hot-dip process.
- C. ASTM B209-86 Specification for Aluminum and Aluminum Alloy sheet and plate.
- D. ASTM B221 Specification for Aluminum (S-5™ Clamps & Pipe Fittings).
- E. ASTM A500 Posts and Top Rails, General performance.
- F. ASTM B117 Salt Spray Test - Exterior and Interior Zinc coating on tubing.
- G. ASTM B179 & ASTM B26 high tensile 525.2 Aluminum/Magnesium Alloy slip-on or bolt-on pipe fittings.
- H. IBC – International Building Code—2012—1607.8.1, Exception 2.
- I. OSHA – Occupational Safety and Health Administration, 1926.502 (b)(1)(2)(3)

1.3 SUBMITTALS/SHOP DRAWINGS

1. Architect/Contractor submit proposed layout or detail to manufacturer for review.
2. A Design/Structural Engineer should be consulted to determine feasibility of application, load bearings and safety measures.
3. Manufacturer provides CAD erection details and Bill of Materials.
4. Engineering Load Tests available upon request.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver all Grating, Railing and Accessories to job site properly packaged to protect against damage in transit.
- B. Store all materials and accessories off the ground on platforms. All material should be stored under cover.

1.5 WARRANTIES

- A. Provide manufacturer's standard 1 year warranty against defects in materials and workmanship.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. METALWALK® Grating Sections: Eaton Corp. - Pinckneyville, IL.
- B. Rail Tubing: Allied Tube & Conduit – Harvey, IL.
- C. Structural Slip-On/Bolt-On Pipe Fittings: Hollaender Manufacturing Company – Cincinnati, OH
- D. Components and Hardware: Design Components, Inc. – Atlanta, GA

2.2 MATERIALS

A. RAILING

1. Handrail shall comply with OSHA Standard 29 CFR 1926.502(b). Handrail shall withstand a minimum concentrated 200lb load applied to top rail at any point. Test method and results available upon request.
2. All handrails shall be fabricated using CMT-20 cold rolled high strength steel tubing with a three step exterior coating process consisting of Hot-Dipped Uniform Zinc Galvanizing, a Conversion coating and a clear Polymer topcoat. Interiors walls to have corrosion resistant coating.
3. Dimensions - Normal Pipe Size 1.9" O.D. 1 1/2" NPS., 13 gauge (.083 min.)
4. Standard Length - 10'-0" (other lengths available).



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B. PIPE FITTINGS

1. Speed Rail® Slip-On Fittings with setscrews; wrench size = 3/16".
Fittings shall be high tensile Aluminum Magnesium Alloy.

C. METALWALK® Grating Sections

1. 18 gauge, G90 Galvanized Steel. [AZ-50 Galvalume Steel & .080 Aluminum available]
2. Section Width - 12" . [6" & 9" widths available]
3. Standard Length - 10', 12', 20' & 24' [other lengths available]
4. Channel Height - 2 ½" [other heights available]
5. Flange Options - Female/Male, Male/Male
6. Surface Condition - Anti-Skid

D. COMPONENTS & ACCESSORIES

1. Support Plates - 14 gauge Galvanized Steel, pre-punched to accept Square Base Flange for Vertical Post. [Aluminum available if no handrail is required]
2. Splice Channels, Ledger Angles - 18 & 14 gauge Galvanized Steel.
3. Clips, Clamps, Bolts, Nuts and Washers will be Stainless Steel, compatible non-corrosive material, or Electro-Plated and size as specified.
4. S-5™ Clamps 6061-T6 Aluminum with Stainless Steel Set Screws, Bolt and Washer.

E. LOAD TABLE

1. Grating - Average Galvanized Steel weight 3.0 pounds per lineal foot or square foot (12"wide).
2. Handrail - Average Galvanized Steel weight 1.40 pounds per lineal foot (single rail).
3. Vertical Posts - Average Galvanized Steel weight 5 lbs each.

2.3 FABRICATION

- A. Railing is continuously roll-formed to tubular shape, then welded along its length to form virtually seamless tubing with swaged ends.
- B. Roll form METALWALK® Grating in continuous lengths.
- C. Fabricated Supports, Splice Channels and Ledger Angles by press brake and punch press.
- D. Special clips die formed or Cast Aluminum
- E. S-5™ Clamps 6061-T6 Aluminum

2.4 FINISH

- A. Mill Finish - Standard
- B. Painted - Powder Coat after fabrication by manufacturer
- C. By others in the field

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to installation, verify:
 - 1- Panel seaming is complete.
 - 2- Panel attachment is sufficient to withstand loads transferred from clamps.
 - 3- Installation will not impede drainage.
 - 4- Panel rib spacing and height have been verified with Design Components, Inc.
 - 5- Pitch for level system (if applicable) with Design Components, Inc.

3.2 INSTALLATION

- A. Install METALWALK® Grating sections in accordance with manufacturer's recommendations and shop drawings.
- B. Position METALWALK® Grating sections flat and square with ends bearing minimum 2" on supporting structure.
- C. Keep METALWALK® Grating sections at least 1/4" away from structural steel and 1/2" from concrete walls.
- D. Allow clearance at joints between grating sections of maximum 1/4" at Splice Channels.
- E. Allow clearance at perpendicular intersection of a maximum 3/8" at the end.
- F. A Design/Structural Engineer should be consulted to determine feasibility of application, load bearings and safety measures.



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