

SECTION 05520

HANDRAILS AND RAILINGS

PART 1 - GENERAL

- 1.1 SECTION INCLUDES
 - A. Steel handrails, balusters, and fittings.
- 1.2 RELATED SECTIONS
 - A. Section 09900 - Painting: Paint finish.
 - B. ASTM A53 - Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.
 - C. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.
 - D. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
 - E. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
 - F. ASTM B211 - Aluminum-Alloy Bars, Rods, and Wire.
 - G. ASTM B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
 - H. ASTM B241 - Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube.
 - I. ASTM B483 - Aluminum and Aluminum-Alloy Drawn Tubes for General Purpose Applications.
 - J. SSPC - Steel Structures Painting Council.
- 1.3 SUBMITTALS
 - A. Submit under provisions of Section 01300.
 - B. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.
- 1.4 FIELD MEASUREMENTS
 - A. Verify that field measurements are as indicated on Drawings.

PART 2 - PRODUCTS

2.1 HAND RAILS & GUARD RAILS

- A. Rails and Posts: Per drawings.
- B. Pickets: Per drawings.
- C. Fittings: Elbows, wall brackets, escutcheons; machined steel.
- D. Mounting: Prepare backing plate for mounting in existing wall construction.
- E. Exposed Fasteners: Flush countersunk screws or bolts; consistent with design of railing.
- F. Shop and Touch-Up Primer: SSPC 15, Type 1, red oxide.
- G. Meet all ADA Requirements for Handrails and Guard Rails.

2.2 FABRICATION

- A. Fit and-shop assemble components in largest practical sizes, for delivery to site.
- B. Fabricate components with joints tightly fitted and secured.
- C. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- E. Continuously seal joined pieces by intermittent welds and plastic filler.
- F. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- G. Accurately form components to suit stairs and landings, to each other and to building structure.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

3.2 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate Sections.

3.3 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Provide anchors, plates and angles required for connecting railings to structure. Anchor railing to structure.
- C. Touch-up welds with primer. Grind welds smooth. Use plastic filler to finish smooth.
- D. Conceal bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.

3.4 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.

END OF SECTION

