

## **SECTION 102600.1**

### **HANDRAILS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. This section includes the following types of wall protection systems:
  - 1. Handrails
- B. Related Sections: The following sections contain requirements related to this section:
  - 1 Bumper Guards, Crash Rails, Corner Guards, Accent Rails, Wall Covering, Wall Panels, Door Protection; refer to section 102600 "Wall and Door Protection"
  - 2 Blocking in walls for fasteners; refer to section 092200 "Supports for Plaster and Gypsum Board"

##### **1.2 REFERENCES**

- A. National codes (IBC, UBC, SBCCI, BOCA, OSHA, Life Safety, OSHPD and ADA)
- B. American Society for Testing and Materials (ASTM)

##### **1.3 SUBMITTALS**

- A. General: Submit the following in accordance with conditions of contract and Division 1 specification section 013300 "Submittal Procedures".
- B. Product data and detailed specifications for each system component and installation accessory required, including installation methods for each type of substrate.
- C. Shop drawings showing locations, extent and installation details of handrails. Show methods of attachment to adjoining construction.
- D. Samples for verification purposes: Submit the following samples, as proposed for this work, for verification of color, finish and end cap attachment and alignment.
  - 1. 12" (304.8mm) long sample of each model specified including end cap and mounting hardware.
- E. Maintenance data for wall protection system components for inclusion in the operating and maintenance manuals specified in Division 1.

##### **1.4 QUALITY ASSURANCE**

- A. Installer qualifications: Engage an installer who has no less than 3 years experience in installation of systems similar in complexity to those required for this project.
- B. Manufacturer's qualifications: Not less than 5 years experience in the production of specified products and a record of successful in-service

performance.

- C. Code compliance: Assemblies should conform to all applicable codes including IBC, UBC, SBCCI, BOCA, OSHA, Life Safety, OSHPD and ADA.
- D. Single source responsibility: Provide all components of the wall protection system manufactured by the same company to ensure compatibility of color, texture and physical properties.

#### **1.5 DELIVERY, STORAGE AND HANDLING**

- A. Deliver materials to the project site in unopened original factory packaging clearly labeled to show manufacturer.
- B. Store materials in original, undamaged packaging in a cool, dry place out of direct sunlight and exposure to the elements. A minimum room temperature of 40°F (4°C) and a maximum of 100°F (38°C) should be maintained.
- C. Material must be stored flat.

#### **1.6 PROJECT CONDITIONS**

- A. Materials must be acclimated in an environment of 65°-75°F (18°-24°C) for at least 24 hours prior to beginning the installation.
- B. Installation areas must be enclosed and weatherproofed before installation commences.

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. Solid Wood Components: Shall be manufactured from plain sawn, FAS grade hardwood, kiln dried to a moisture content of 6% to 10%. All wood components shall be factory finished. Wood components to be final coated with catalyzed, high solids, clear conversion varnish using a two coat process. Finish shall be in accordance with specified AWI finish system. Coverage shall be a minimum of 3-5 mils. Gloss shall be measured on 60° gloss meter as per ASTM D523.
- B. Stainless Steel Components: shall be fabricated from type 304 stainless steel with a #4 satin finish.
- C. Fasteners: All necessary fasteners to be supplied by the manufacturer.

#### **2.2 HANDRAILS**

- A. Handrails to be: Surface mounted assembly consisting of wood handrail furnished in random lengths for field cutting or cut-to size with stainless steel ends and brackets installed in field. Attachment hardware shall be appropriate for wall construction.
  - 1. Provide singular solid wood rail assembly with stainless steel end caps

and brackets. Wood options: Bamboo, Maple, Beech, Ash or Oak woods. FSC certified. Standard finish options: Natural, Light Oak, Honey, Cherry and Walnut.

## **2.3 FABRICATION**

- A. General: Fabricate wall protection systems to comply with requirements indicated for design, dimensions, detail, finish and member sizes.
- B. Preassemble components in shop as much as possible to minimize field assembly.
- C. Fabricate components with wood joints lightly chamfered. Provide surfaces free of chipping, dents and other imperfections.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Verification of conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.
  - 1. Do not proceed until unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

- A. Surface preparation: Prior to installation, clean substrate to remove dirt, debris and loose particles. Perform additional preparation procedures as required by manufacturer's instructions.
- B. Protection: Take all necessary steps to prevent damage to material during installation as required in manufacturer's installation instructions.

### **3.3 INSTALLATION**

- A. Install the work of this section in strict accordance with the manufacturer's recommendations.
- B. Use only approved mounting hardware, and locating all components firmly into position, level and plumb.
- C. Temperature at the time of installation must be between 65°-75°F (18°-24°C) and be maintained for at least 48 hours after the installation.

### **3.4 CLEANING**

- A. General: Immediately upon completion of installation, clean rails and accessories in accordance with manufacturer's recommended cleaning method.
- B. Remove surplus materials, rubbish and debris resulting from installation as work progresses and upon completion of work.

### **3.5 PROTECTION**

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- A. Protect installed materials to prevent damage by other trades. Use materials that may be easily removed without leaving residue or permanent stains.

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