



SECTION 05521

ACCESS ADA RAILING

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Site built ADA-compliant handrails.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Associated metal supports.

1.3 REFERENCES

- A. Americans with Disabilities Act Accessibility Guidelines (ADA).
- B. American National Standards Institute (ANSI) - A58.1 Minimum Design Loads in Buildings and Other Structures.
- C. American National Standards Institute (ANSI) - A17.1 Accessible and Usable Buildings and Facilities.
- D. American Society of Testing and Materials (ASTM) A47 - Standard Specification for Ferritic Malleable Iron Castings.
- E. American Society of Testing and Materials (ASTM) A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- F. American Society of Testing and Materials (ASTM) A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.

- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings: Drawings showing fabrication and installation of handrails and guardrails including plans, elevations, sections, details of components, anchor details, and attachment to adjoining units of work.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

## 1.5 QUALITY ASSURANCE

- A. Handrailing Structural Requirements:
  - 1. Handrail and wall rail assemblies and attachments shall withstand a minimum concentrated load of 200 pounds (90719 g) applied horizontally or vertically down at any point on the top rail.
  - 2. Handrail assemblies shall be designed to resist a load of 50 pounds per linear foot (0.73 kN/m) applied in any direction at the top and to transfer this load through the supports to the structure.
- B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  - 1. Install in areas designated by Architect.
  - 2. Do not proceed with remaining work until workmanship and installation are approved by Architect.
  - 3. Refinish mock-up area as required to produce acceptable work.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Materials to be delivered to the job site in good condition and adequately protected against damage as handrails are a finished product.
- B. Store products in manufacturer's unopened packaging until ready for installation.

## 1.7 PROJECT CONDITIONS

- A. Field Measurements: Where handrails and railings are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication; show recorded measurements on final shop drawings.
  - 1. Where field measurements cannot be made without delaying the railing fabrication and delivery, obtain guaranteed dimensions in writing by the Contractor and proceed with fabrication of products to not delay fabrication, delivery and installation.
- B. Coordinate fabrication and delivery schedule of handrails with construction progress and sequence to avoid delay of railing installation.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kee Safety, Inc., which is located at: 100 Stradtman St. ;

Buffalo, NY 14206; Toll Free Tel: 800-851-5181; Tel: 716-896-4949; Fax:  
716-896-5696; Email: [request info](#); Web: [www.keesafety.com/us](http://www.keesafety.com/us)

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

## 2.2 SYSTEMS

- A. Product: Kee Access ADA Railing System as manufactured by Kee Safety 1nc.
  - 1. Railings shall provide a smooth contiguous gripping surface throughout the entire length of the railing.
  - 2. The system shall not require drilling, welding or threading.
- B. Handrails: Provide pipe, fittings, and accessories as indicated or required to match design indicated on the Drawings.
  - 1. Fittings: Cast iron.
  - 2. Steel Pipe: Schedule 40 galvanized pipe.
  - 3. Handrail Pipe Size: 1-1/4 inches (32 mm).

## 2.3 COMPONENTS

- A. Fittings Material:
  - 1. Galvanized Malleable Cast Iron: Kee Access structural pipe fittings, ASTM A447 with ASTM A153 galvanizing.
- B. Base and Flange:
  - 1. Socket Fittings.
  - 2. Palm Fittings.
  - 3. Wall Flange.
  - 4. Cover Flange.
- C. Fittings:
  - 1. Upright Top Cap.
  - 2. Wall Mounted Handrail Bracket.
  - 3. End Post handrail Return.
  - 4. Wall Mounted End Return.
  - 5. Top Fix Rail Assembly.
  - 6. Variable Angle Elbow.
  - 7. 90 Degree Solid Elbow.
  - 8. Handrail Bracket.
  - 9. Twin Handrail Socket.
  - 10. Twin Handrail Socket - Capped.
  - 11. Handrail Connector - Internal Coupling.
  - 12. Single handrail Socket.
  - 13. Single handrail Socket - Capped.
  - 14. Add-on Single Handrail Socket:
    - a. 1-1/4 inches (32 mm) inside diameter.
    - b. 1-1/2 inches (38 mm) inside diameter.

## 2.4 FINISH

- A. Finish: Polyester factory applied spray coating.
- B. Fasteners: Type 304 or 305 stainless steel.

## 2.5 FABRICATION

- A. Fit and shop assemble components in largest practical sizes for delivery to site.
- B. Upright tops shall be plugged with weather resistant material.
- C. Assemble components with joints tightly fitted and secured. Accurately form components to suit installation.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

#### 3.2 PREPARATION

- A. Coordinate post setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as sleeves, concrete inserts, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete and masonry construction.
  - 1. Coordinate delivery of anchorages to project site.
  - 2. Coordinate that blocking is in place for all mounting fasteners.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

#### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Fit exposed connections accurately together to form tight joints. For all connections with Kee fittings, each set screw is to be tightened to 29 foot pounds (39 N-m) of torque.
- C. Set handrails and accurately in location, alignment, and elevation, measured from established lines and levels.
- D. Set posts plumb within a tolerance of 1/8 inch (3 mm).

#### 3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION