

SECTION 10 21 13  
TOILET COMPARTMENTS  
Design Standard

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Wall backing required to secure mounting brackets.
- B. Support for floor-anchored compartments.
- C. Toilet room accessories.

1.2 REFERENCES (including, but not limited to)

- A. National Fire Protection Association 101 Life Safety Code 2000 Edition, Chapters 5, 6, 8-30.
- B. ANSI A117.1-1998 Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
- C. Title 24, California Code of Regulations, Parts 2, 3, and 5.
- D. ADA, *Accessibility Guidelines for Buildings and Facilities*, Federal Register Volume 56, Number 144, Rules and Regulations.
- E. US Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Program, Version 2.1
- F. American Society for Testing and Materials Standards:
  - 1. ASTM E84-01 Standard Test Method for Surface Burning Characteristics of Building Material.
  - 2. ASTM D2794-93(1999)e1 Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
  - 3. ASTM D2197-98(2002) Standard Test Method for Adhesion of Organic Coatings by Scrape Adhesion.
  - 4. ASTM D6578-00 Standard Practice for Determination of Graffiti Resistance.

1.3 PERFORMANCE REQUIREMENTS

- A. Graffiti Resistance: Partition material shall have the following graffiti removal characteristics when tested in accordance with ASTM D6578-00 Standard Practice for Determination of Graffiti Resistance in accordance with Section 9, "Graffiti Removal Procedure Using Manual Solvent Rubs":
  - 1. Cleanability: Five (5) required staining agents shall be cleaned off material.
- B. Scratch Resistance: Partition material shall have the following characteristics when tested in accordance with ASTM D2197-98(2002) Standard Test Method for Adhesion of Organic Coating by Scrape Adhesion, using Gardner Stock #PA-2197/ST pointed stylus attachment on scrape tester:
  - 1. Scratch Resistance: Maximum Load Value shall exceed 10 kilograms.

- C. Impact Resistance: Partition material shall have the following characteristics when tested in accordance with ASTM D2794-93(1999)e1 Standard Test Method for Resistance of Organic Coating to the Effects of Rapid Deformation (Impact), using .625" hemispherical indenter with 2-lb impact weight:
  - 1. Impact Resistance: Maximum Impact Force value shall exceed 30 inch-lbs.
- D. Fire Resistance: Partition material shall comply with the following requirements, when tested in accordance with ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials:
  - 1. Smoke Developed Index: Not to exceed 450.
  - 2. Flame Spread Index: Not to exceed 75.
  - 3. Material Fire Ratings:
    - a. National Fire Protection Association (NFPA): Class B.
    - b. International Code Council (ICC): Class B.
- E. LEEDs Contribution: Partition material shall contribute to the following US Green Building Council's Leadership in Energy and Environmental Design Program Credits (USGBC LEED Version 2.1):
  - 1. Recycled Content (MR Credit 4.1): shall contain a minimum of 5% recycled content.
  - 2. Recycled Content (MR Credit 4.2): shall contain a minimum of 10% recycled content.
  - 3. Low Emitting Materials (EQ Credit 4.4): shall not contain urea-formaldehyde resins.
  - 4. Rapidly Renewable Materials (MR Credit 6.0): more than 5% of material's value shall be harvested from plants harvested within a ten-year cycle.

#### 1.4 SUBMITTALS

- A. Comply with requirements of Section regarding submittals.
- B. Manufacturer's Data
  - 1. Provide required number copies of:
    - a. Product data sheets.
    - b. Installation instructions.
    - c. Cleaning and maintenance instructions.
    - d. Replacement parts information.
- C. Shop Drawings
  - 1. Provide required number of copies of all shop drawings.
  - 2. Show fabrication and erection of compartment assemblies, to extent not fully described by manufacturer's data sheets.
  - 3. Show anchorage, accessory items and finishes.

4. Provide location drawings for bolt hole locations in supporting members for attachment of compartments.

D. Samples

1. Furnish scale model of compartments, including stile, shoe, door, door hardware, divider panel, and mounting brackets.
2. Furnish sections showing stile anchoring and leveling devices, concealed threaded inserts, panel, stile, and edge construction.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver items in manufacturer's original unopened protective packaging.
- B. Store materials in original protective packaging to prevent physical damage or wetting.
- C. Handle so as to prevent damage to finished surfaces.

1.6 WARRANTY

- A. Furnish ten-year limited warranty for panels, doors, and stiles against breakage, corrosion, delamination, and defects in factory workmanship.
- B. Furnish one-year guarantee against defects in material and workmanship for stainless steel door hardware and mounting brackets.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Model numbers for toilet partitions manufactured by Bobrick Washroom Equipment, Inc., represented by R. E. Edwards & Associates (925-829-2942), are listed to establish a standard of quality for design, function, materials, workmanship, and appearance. Other manufacturers may be submitted for evaluation by the architect by following the conditions of the substitutions language in Section 00200 Instructions to Bidders or Section 01600 Product Requirements.
- B. Toilet partitions shall be the product(s) of a single manufacturer.

2.2 MOUNTING CONFIGURATIONS

- A. Toilet Partitions/Shower Dividers/Dressing Compartments shall be:

Floor-Anchored (1091 Sierra™ Series)

or -

Overhead-Braced (1092.67 Sierra™ Series)

or -

Post-to-Ceiling (1093 Sierra™ Series)

or -

Wall-Hung (1095 Sierra™ Series)

- B. Urinal Screens shall be:
  - Floor-Anchored (1091 Sierra™ Series):
  - or -
  - Post-to-Ceiling (1093 Sierra™ Series)
  - or -
  - Wall-Hung (1095 Sierra™ Series)

## 2.3 COMPONENTS/MATERIALS

- A. Stiles, Panels, Doors, and Screens
  - 1. Stiles, Panels, Doors, and Screens shall be all be manufactured from Solid Color Reinforced Composite material.
- B. Toilet Partition Material
  - 1. Toilet partitions shall be constructed of Solid Color Reinforced Composite material, which is composed of dyes, organic fibrous material, and polycarbonate/phenolic resins. Material shall have a non-ghosting, graffiti-resistant surface integrally bonded to core through a series of manufacturing steps requiring thermal and mechanical pressure. Edges of material shall be the same color as the surface. Color: SC04 – Forest Green.
  - 2. Toilet partitions constructed of High Density Polyethylene (HDPE) or High Density Polypropylene will not be acceptable.
- C. Finish Thickness
  - 1. Stiles and doors shall be 3/4" (19 mm).
  - 2. Panels and benches shall be 1/2" (13 mm).
- D. Hardware
  - 1. All hardware to be 18-8, type-304 stainless steel with satin finish.
  - 2. Hardware of chrome-plated "Zamak", aluminum, or extruded plastic is unacceptable.
- E. Latch
  - 1. Sliding door latch shall be 14 gauge (2 mm) and shall slide on nylon track.
  - 2. Sliding door latch shall require less than 5-lb force to operate. Twisting latch operation will not be acceptable.
  - 3. Latch track shall be attached to door by machine screws into factory-installed threaded brass inserts.
  - 4. Threaded brass inserts shall be factory installed for door hinge and latch connections and shall withstand a direct pull exceeding 1,500 lbs. per insert.
  - 5. Through bolted, stainless steel, pin-in-head Torx sex bolt fasteners shall be used at latch keeper-to-stile connections and shall withstand direct pull force exceeding 1,500 lbs. per fastener.

**F. Hinges**

1. Hinge shall be 16-gauge (1.6-mm) continuous piano hinge.
2. All doors shall be equipped with self-closing hinge.
3. Continuous piano hinge shall be attached to door and stile by theft-resistant, pin-in-head Torx stainless steel machine screws into factory-installed, threaded brass inserts
4. Fasteners secured directly into the core are not acceptable.
5. Door shall be furnished with two 11-gauge (3-mm) stainless steel door stop plates with attached rubber bumpers to resist door from being kicked in/out beyond stile.
6. Door stops and hinges shall be secured with stainless steel, pin-in-head Torx machine screws into threaded brass inserts.
7. Threaded brass inserts shall withstand a direct pull force exceeding 1,500 lbs per insert.

**G. Mounting Bracket**

1. Mounting brackets shall be 18-gauge (1.2- mm) stainless steel and extend full height of panel.
2. U-channels shall be furnished to secure panels to stiles.
3. Angle brackets shall be furnished to secure stiles to walls and panels to walls.
4. Fasteners at locations connecting panels-to-stiles shall utilize through bolted, stainless steel, pin-in-head Torx sex bolt fasteners. Through-bolted fasteners shall withstand direct pull force exceeding 1,500 lbs. per fastener.
5. Wall mounted urinal screen brackets shall be 11 gauge (3 mm) double thickness.

**H. Leveling Device shall be 7-gauge, 3/16" (5-mm) hot rolled steel bar; chromate-treated and zinc-plated; through-bolted to base of solid color reinforced composite stile.****I. Stile Shoe shall be one-piece, 4" (102-mm) high, type-304, 22-gauge (0.8-mm) stainless steel with satin finish. Top shall have 90° return to stile. Shoe will be composed of one-piece of stainless steel and capable of being fastened (by clip) to stiles starting at wall line.****J. Headrail (Overhead Braced) shall be satin finish, extruded anodized aluminum (.125" / 3-mm thick) with anti-grip profile.****K. Compartment Hooks: In each toilet compartment, furnish and install a Bobrick B212 Clothes Hook and Bumper at 38 to 40" AFF for a barrier-free installation. Utilize through-bolted, stainless steel, pin-in-head Torx sex bolt fasteners.****2.4 FABRICATION**

- A. Vandal-Resistant Hardware Option: for Institutional Hardware option add suffix .67 to 109X Series.

**PART 3 – EXECUTION****3.1 INSPECTION**

- A. Check areas scheduled to receive compartments for correct dimensions, plumbness of walls, and soundness of surfaces that would affect installation of mounting brackets.

- B. Verify spacing of plumbing fixtures to assure compatibility with installation of compartments.
- C. Do not begin installation of compartments until conditions are satisfactory.

### 3.2 ERECTION

- A. Install compartments rigidly, straight, plumb, and level and in accordance with manufacturer's installation instructions.
- B. Installation methods shall conform to manufacturer's recommendation for backing and Proper support.
- C. Conceal evidence of drilling, cutting, and fitting to room finish.
- D. Maintain uniform clearance at vertical edge of doors.

### 3.3 ADJUSTMENT AND CLEANING

- A. Adjust hardware for proper operation after installation.
- B. Set hinge cam on in-swinging doors to hold doors open when unlatched.
- C. Set hinge cam on out-swinging doors to hold unlatched doors in closed position.
- D. Clean exposed surfaces of compartments, hardware, and fittings.

END OF SECTION