

## SECTION 10 21 13

TOILET COMPARTMENTS  
01/07

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ALUMINUM ASSOCIATION (AA)

AA DAF-45 (2003) Designation System for Aluminum Finishes

## ASTM INTERNATIONAL (ASTM)

ASTM A 123/A 123M (2008) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM A 167 (1999; R 2004) Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

ASTM A 336/A 336M (2007) Standard Specification for Alloy Steel Forgings for Pressure and High-Temperature Parts

ASTM A 385 (2005) Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)

ASTM A 653/A 653M (2007) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM B 221 (2008) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

ASTM B 456 (2003) Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium

ASTM B 86 (2006) Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings

ASTM D 2092 (1995; R 2001e1) Standard Guide for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting

## INTERNATIONAL CODE COUNCIL (ICC)

ICC A117.1 (2003; R 2004) Standard for Accessible and Usable Buildings and Facilities

## SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL (SAE)

SAE AMS-QQ-C-320 (2000) Chromium Plating (Electrodeposited)-FSC MFFP

## U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-60003 (Basic) Partitions, Toilet, Complete

## U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

36 CFR 1191 Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

## SD-02 Shop Drawings

Installation Drawings; G, AE  
Fabrication Drawings; G, AE

Drawings showing plans, elevations, details of construction, hardware, reinforcing, fittings, mountings, and anchorings for metal partitions and urinal screens. Installation drawings as specified.

## SD-03 Product Data

Toilet Partition System; G, AE  
Cleaning and Maintenance Instructions; G  
Colors And Finishes; G, AE  
Galvanized Steel Sheet  
Sound Deadening Cores  
Partition Panels and Doors; G, AE  
Anchoring Devices and Fasteners  
Hardware and Fittings  
Brackets  
Door Hardware; G, AE  
Overhead-Braced Partitions; G, AE

Manufacturer's technical data and catalog cuts including installation and cleaning instructions.

## SD-04 Samples

Colors and Finishes; G, AE

Manufacturer's standard color charts and color samples.

#### Partition Panels

Three samples showing a finished edge on two adjacent sides and core construction, each not less than 12-inch square

#### Hardware and Fittings Anchoring Devices and Fasteners

Three samples of each item. Approved hardware samples may be installed in the work if properly identified.

#### SD-07 Certificates

##### Certification

Documentation of product quality, as specified.

### 1.3 SYSTEM DESCRIPTION

Provide a complete and usable toilet partition system, including toilet enclosures, urinal screens, hardware, and support components. Furnish the partition system from a single manufacturer, with a standard product as shown in the most recent catalog data. Submit Fabrication Drawings for metal toilet partitions and urinal screens consisting of fabrication and assembly details to be performed in the factory. Submit manufacturer's Cleaning and Maintenance Instructions with Fabrication Drawings for review.

### 1.4 REGULATORY REQUIREMENTS

Conform to ICC A117.1 code for access for the handicapped operation of toilet compartment door and hardware.

### 1.5 DELIVERY, STORAGE, AND HANDLING

Deliver materials in the manufacturer's original unopened packages with the brand, item identification, and project reference clearly marked. Store Components in a dry location that is adequately ventilated; free from dust, water, other contaminants, and damage during delivery, storage, and construction.

### 1.6 WARRANTY

Provide Certification or warranties that metal toilet partitions will be free of defects in materials, fabrication, finish, and installation and will remain so for a period of not less than 1 year after completion.

### 1.7 FIELD MEASUREMENTS

Take field measurements prior to the preparation of drawing and fabrication to ensure proper fits.

## PART 2 PRODUCTS

## 2.1 MATERIALS

## 2.1.1 Galvanized Steel Sheet

Provide galvanized steel sheet cold-rolled, stretcher-level, commercial quality material, conforming to ASTM A 653/A 653M. Conform surface preparation of material for painting to ASTM D 2092, Method A.

## 2.1.2 Sound-Deadening Cores

Provide sound deadening consisting of treated kraft paper honeycomb cores with a cell size of not more than 1 inch. Resin-material content shall weigh not less than 11 percent of the finished core weight. Expanded cores shall be faced on both sides with kraft paper.

## 2.1.3 Anchoring Devices and Fasteners

Provide steel anchoring devices and fasteners hot-dipped galvanized after fabrication, in conformance with ASTM A 385 and ASTM A 123/A 123M. Conceal all galvanized anchoring devices.

## 2.1.4 Brackets

Wall brackets shall be two-ear panel brackets, T-style, 1-inch stock. Provide stirrup style panel-to-pilaster brackets.

## 2.1.5 Hardware and Fittings

## 2.1.5.1 General Requirements

Conform hardware for the toilet partition system to CID A-A-60003 for the specified type and style of partitions. Provide hardware finish highly resistant to alkalis, urine, and other common toilet room acids. Comply latching devices and hinges for handicap compartments with 36 CFR 1191; provide chrome-plated steel or stainless steel devices and hinges with door latches that operate without either tight grasping or twisting of the wrist of the operator.

- a. Conform cold-rolled sheet steel to ASTM A 336/A 336M, commercial quality.
- b. Zinc-base alloy shall conform to ASTM B 86, Alloy AC41-A.
- v. Aluminum shall conform to ASTM B 221.
- d. Corrosion-resistant steel shall conform to ASTM A 167, Type 302.

## 2.1.5.2 Finishes

- a. Chrome plating shall conform to ASTM B 456.
- b. Finish shall conform to SAE AMS-QQ-C-320, Class I, Type I.
- c. Aluminum shall have a clear anodic coating conforming to AA DAF-45.
- d. Corrosion-resistant steel shall have a No. 4 finish.

e. Exposed fasteners shall match the hardware and fittings.

#### 2.1.6 Door Hardware

##### 2.1.6.1 Hinges

Provide self-lubricating hinges with the indicated swing.

Hinge shall be adjustable to hold in-swinging doors open at any angle up to 90 degrees and outswinging doors to 10 degrees.

##### 2.1.6.2 Latch and Pull

Latch and pull shall be a combination rubber-faced door strike and keeper equipped with emergency access.

##### 2.1.6.3 Coat Hooks

Coat hooks shall be combination units with hooks and rubber tipped pins.

#### 2.2 PARTITION PANELS AND DOORS

Provide partition panels and doors not less than 1 inch thick with face sheets not less than 0.0396 inch thick.

##### 2.2.1 Toilet Enclosures

Conform toilet enclosures to CID A-A-60003, Type I, Style A, floor supported, overhead braced. Furnish width, length, and height of toilet enclosures as shown. Provide a width of 1 inch. Finish surface of panels shall be painted metal, Finish 1; water resistant; graffiti resistant; non-absorbent; Panels indicated to receive toilet paper holders or grab bars for mounting of the items required. Provide grab bars to withstand a bending stress, shear stress, shear force, and a tensile force induced by 250 lbf. Grab bars shall not rotate within their fittings.

###### 2.2.1.1 Doors

Unless noted otherwise, provide 24-inch wide in-swinging doors for standard toilet compartments and 36-inch wide out-swinging doors with a minimum 32-inch wide clear opening for compartments indicated to be handicapped accessible.

##### 2.2.2 Urinal Screens

Conform urinal screens to CID A-A-60003, Type III, Style B, wall hung. Provide finish for surface of screens as painted metal, Finish 1; water resistant; graffiti resistant; non-absorbent; Furnish width and height of urinal screens as shown. Provide thickness of 1 inch. Secure wall hung urinal screens with a minimum of three wall stirrup brackets or 42 inch long, continuous flanges. Fabricate screens from the same types of panels and pilasters as the toilet partitions. Use corrosion-resistant steel fittings and fasteners.

#### 2.3 OVERHEAD-BRACED PARTITIONS

Pilasters shall be not less than 1-1/4 inch thick with face sheets not less than 0.0393 inch thick. Provide anchoring device at the bottom of the pilaster consisting of a channel-shaped floor stirrup fabricated from not

less than 0.0635 inch thick material and a leveling bolt. Secure the stirrup to the pilaster with not less than a 3/16 inch bolt and nut after the pilaster is leveled. Secure the stirrup to the floor with not less than two lead expansion shields and sheetmetal screws. Fabricate overhead brace from a continuous extruded aluminum tube not less than 1 inchwide by 1-1/2 inch high, 0.125-inch wall thickness. Finish shall be AA-C22A31 in accordance with AA DAF-45. Set and secure brace into the top of each pilaster. Fabricate 3 inch high trim piece at the floor from not less than 0.030 inch thick corrosion-resistant steel.

#### 2.4 PILASTER SHOES

Provide shoes at pilasters to conceal floor-mounted anchorage. Pilaster shoes shall be stainless steel.

#### 2.5 HARDWARE

Hardware for the toilet partition system shall conform to CID A-A-60003 for the specified type and style of partitions. Hardware finish shall be highly resistant to alkalis, urine, and other common toilet room acids. Hardware shall include: chrome plated non ferrous cast pivot hinges, gravity type, adjustable for door close positioning; nylon bearings; black anodized aluminum door latch; door strike and keeper with rubber bumper; and cast alloy chrome plated coat hook and bumper. Latching devices and hinges for handicap compartments shall comply with 36 CFR 1191 and shall be stainless steel door latches that operate without either tight grasping or twisting of the wrist of the operator. Screws and bolts shall be stainless steel, tamper proof type. Wall mounting brackets shall be continuous, full height, stainless steel, in accordance with toilet compartment manufacturer's instructions. Floor-mounted anchorage shall consist of corrosion-resistant anchoring assemblies with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor.

#### 2.6 COLORS AND FINISHES

##### 2.6.1 Colors

Provide manufacturer's standard color charts for color of finishes for toilet partition system components.

##### 2.6.2 Finishes No. 1 Through No. 3

Conform partitions, panels, screen, and door finishes to CID A-A-60003 finished with Finish No. 1, baked enamel.

### PART 3 EXECUTION

#### 3.1 PREPARATION

Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive work. Verify correct spacing of plumbing fixtures. Verify correct location of built in framing, anchorage, and bracing. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the work of this section. Do not proceed with work until unsatisfactory conditions have been corrected.

### 3.2 METAL PARTITION FABRICATION

- a. Fabricate metal [Partition Panels](#), doors, screens, and pilasters required for the project from galvanized-steel face sheets with formed edges. Face sheets shall be pressure-laminated to the sound-deadening core with edges sealed with a continuous locking strip and corners mitered and welded. Ground all welds smooth. Provide concealed reinforcement for installation of hardware, fittings, and accessories. Surface of face sheets shall be smooth and free from wave, warp, or buckle.
- b. Before application of an enamel coating system, solvent-clean galvanized-steel surfaces to remove processing compounds, oils, and other contaminants harmful to coating-system adhesion. After cleaning, coat the surfaces with a metal-pretreatment phosphate coating. After pretreatment, finish exposed galvanized-steel surfaces with a baked-enamel coating system as specified.
- c. Provide an enamel coating system consisting of a factory-applied baked acrylic enamel coating system. Coating system shall be a durable, washable, stain-resistant, mar-resistant finish.

### 3.3 INSTALLATION

Install partitions rigid, straight, plumb, and level, with the panels centered between the fixtures. Provide a panel clearance of not more than [1/2 inch](#) and secure the panels to walls and pilasters with not less than two wall brackets attached near the top and bottom of the panel. Locate wall brackets so that holes for wall bolts occur in masonry or tile joints. Secure Panels to pilasters with brackets matching the wall brackets. Provide for adjustment due to minor floor variations. Locate head rail joints at pilaster center lines. Install adjacent components for consistency of line and plane. Equip each door with hinges, one door latch, and one coat hook and bumper. Align hardware to uniform clearance at vertical edges of doors.

- a. Secure panels to hollow gypsum wallboard walls with toggle bolts using not less than [1/4-20](#) screws of the length required for the wall thickness. Toggle bolts shall have a load-carrying strength of not less than [600 pounds](#) per anchor.
- b. Secure panels to ceramic tile on hollow gypsum wallboard walls or hollow concrete-masonry walls with toggle bolts using not less than [1/4-20](#) screws of the length required for the wall thickness. Toggle bolts shall have a load-carrying strength of not less than [600 pounds](#) per anchor.
- c. Submit [Installation Drawings](#) for metal toilet partitions and urinal screens showing plans, elevations, details of construction, hardware, reinforcing and blocking, fittings, mountings and escutcheons. Indicate on drawings the type of partition, location, mounting height, cutouts, and reinforcement required for toilet-room accessories.

### 3.4 OVERHEAD-BRACED PARTITIONS

Secure pilasters to the floor with the anchorage device specified. Make all leveling devices readily accessible for leveling, plumbing, and tightening the installation. Secure overhead brace to the pilaster face with not less than two fasteners per face. Expansion shields shall have a minimum [2-inch](#) penetration into the concrete slab. Tops of doors must be

parallel with the overhead brace when doors are in a closed position.

### 3.5 FINAL ADJUSTMENT

After completion of the installation, make final adjustments to the pilaster-leveling devices, door hardware, and other working parts of the partition assembly. Doors shall have a uniform vertical edge clearance of approximately  $3/16$  inch and shall rest open at approximately 30 degrees when unlatched.

### 3.6 CLEANING

Baked enamel finish shall be touched up with the same color of paint that was used for the finish. Clean all surfaces of the work, and adjacent surfaces soiled as a result of the work, in an approved manner compliant with the manufacturer's recommended cleaning and protection from damage procedures until accepted. Remove all equipment, tools, surplus materials, and work debris from the site.

-- End of Section --