

**SECTION 10 28 00
TOILET, BATH, AND LAUNDRY ACCESSORIES**

SPEC WRITER NOTE:

- 1. Delete text between // // not applicable to project. Edit remaining text to suit project.
- 2. Use this section for custom fabricated items in spaces listed.
- 3. Add items custom designed for these spaces. Verify items are detailed.
- 4. Verify drawings show location and position of accessory items. Location of these items may be scheduled at end of this section, however accessories must be shown on floor plans.
- 5. Show on room elevations dimension/location of accessories, including length and configuration of grab bars, towel bars, mirror sizes, and shelves.
- 6. Coordinate terminology used in this section with drawings.

PART 1 - GENERAL

1.1 DESCRIPTION

A. SUMMARY:

- 1. Section Includes: Toilet and bath accessories at dressing rooms, toilets, baths, locker rooms and other areas indicated on drawings.

1.2 RELATED WORK

SPEC WRITER NOTE: Update and retain references only when specified elsewhere in this section.

- A. Section 09 06 00, SCHEDULE FOR FINISHES: Color of finishes.
- B. Section 09 30 13, CERAMIC/PORCELAIN TILING: Ceramic Toilet and Bath Accessories.
- C. Section 10 21 23, CUBICLE CURTAIN TRACKS: Shower Curtain Break Away Pendant Chain Hooks.

1.3 APPLICABLE PUBLICATIONS

- A. Comply with references to extent specified in this section.
- B. American Society of Mechanical Engineers (ASME):
 - 1. B18.6.4-98(R2005) Thread Forming and Thread Cutting Tapping Screws and Metallic Drive Screws inch.
- C. American Welding Society (AWS):
 - D10.4-86(2000).....Welding Austenitic Chromium-Nickle Stainless Steel Piping and Tubing.

D. ASTM International (ASTM):

- A269/A269M-15a(2019)....Seamless and Welded Austenitic Stainless Steel
Tubing for General Service.
- A312/A312M-19.....Seamless, Welded, and Heavily Cold Worked
Austenitic Stainless Steel Pipes.
- A653/A653M-20.....Steel Sheet, Zinc-Coated (Galvanized) or
Zinc-Iron Alloy-Coated (Galvannealed) by the
Hot-Dip Process.
- A666-15.....Annealed or Cold-Worked Austenitic Stainless
Steel Sheet, Strip, Plate, and Flat Bar.
- A1011/A1011M-18a.....Steel, Sheet and Strip, Hot-Rolled, Carbon,
Structural, High-Strength Low-Alloy,
High-Strength Low-Alloy with Improved
Formability, and Ultra-High Strength.
- B30-20.....Copper Alloys in Ingot Form.
- B75/B75M-20.....Seamless Copper Tube.
- B221-14.....Aluminum and Aluminum-Alloy Extruded Bars,
Rods, Wire, Profiles, and Tubes.
- B221M-13.....Aluminum and Aluminum-Alloy Extruded Bars,
Rods, Wire, Profiles, and Tubes (Metric).
- B456-17.....Electrodeposited Coatings of Copper Plus Nickel
Plus Chromium and Nickel Plus Chromium.
- B824-17.....General Requirements for Copper Alloy Castings.
- C1036-16.....Flat Glass.
- C1048-18.....Heat-Strengthened and Fully Tempered Flat
Glass.
- D635-18.....Rate of Burning and/or Extent and Time of
Burning of Plastics in a Horizontal Position.
- F446-19.....Grab Bars and Accessories Installed in the
Bathing Area.

E. Federal Specifications (Fed. Spec.):

- A-A-3002.....Mirror, Glass.
- FF-S-107C(2).....Screws, Tapping and Drive.
- WW-P-541/8B(1).....Plumbing Fixtures (Accessories, Land Use).

F. National Architectural Metal Manufacturers (NAAMM):

- AMP 500-06.....Metal Finishes Manual.

1.4 SUBMITTALS

- A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Submittal Drawings:
 - 1. Show size, configuration, and fabrication, anchorage and installation details.
 - 2. Show mounting locations and heights.
- C. Manufacturer's Literature and Data:
 - 1. Description of each product.
 - 2. Installation instructions.
- D. Samples:
 - 1. Full sized, complete assembly of each product specified.
 - 2. Approved samples may be incorporated into project.
- E. Certificates: Certify each product complies with specifications.
 - 1. Soap dispensers: Certify soap dispensers are fabricated of material that will not be affected by liquid soap, aseptic detergents, and hexachlorophene solutions.
- F. Qualifications: Substantiate qualifications comply with specifications.
 - 1. Manufacturer // with project experience list //.
- G. Operation and Maintenance Data:
 - 1. Care instructions for each exposed finish product.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Regularly manufactures specified products.

1.6 DELIVERY

- A. Deliver products in manufacturer's original sealed packaging.
- B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, // color, // production run number, and manufacture date.
- C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.7 STORAGE AND HANDLING

- A. Store products indoors in dry, weathertight facility.
- B. Protect products from damage during handling and construction operations.

1.8 WARRANTY

SPEC WRITER NOTE: Always retain construction warranty. FAR includes Contractor's one year labor and material warranty.

- A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum: ASTM B221M (ASTM B221), Alloy 6063-T5 and Alloy 6463-T5.
- B. Stainless Steel:
 - 1. Plate Or Sheet: ASTM A666, Type 304, 0.8 mm (0.031 inch) thick unless otherwise specified.
 - 2. Tubing: ASTM A269/A269M, Grade TP 304, seamless or welded.
 - 3. Pipe: ASTM A312/A312M; Grade TP 304.
- C. Steel Sheet: ASTM A653/A653M, zinc-coated (galvanized) coating designation G90.
- D. Chrome Plating (Service Condition Number SC 2): ASTM B456.
- E. Brass Castings: ASTM B30.
- F. Copper:
 - 1. Tubing: ASTM B75/B75M.
 - 2. Castings: ASTM B824.
- G. Glass:
 - 1. ASTM C1036, Type 1, Class 1, Quality q2, for mirrors, and for mirror doors in medicine cabinets.
 - 2. ASTM C1036, Type 1 Class 1 Quality q3, for shelves in medicine cabinets.
 - 3. ASTM C1048, Kind FT, Condition A, Type 1, Class 1 for glass and mirrors in Mental Health and Behavior Patient Care Units, and Security Examination Rooms.

2.2 PRODUCTS - GENERAL

- A. Basis of Design: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Provide each product from one manufacturer.

SPEC WRITER NOTE: Use the following paragraph for accessories used within Mental Health and Behavioral Patient Care Units.

- C. Products Used Within Mental Health and Behavioral Patient Care Units:
 - 1. Provide accessories free of anchor points.
 - 2. Design accessories for attachment with tamper resistant hardware.

SPEC WRITER NOTE: Specify only toilet accessories applicable to project. Many products that include disposables (paper or soap) are vendor provided and possibly installed. Coordinate with the station.

2.3 PAPER TOWEL DISPENSERS

- A. Surface mounted type with sloping top.
- B. Dispensing capacity for 300 sheets of any type of paper toweling.
- C. Fabricate of stainless steel.
- D. Provide door with continuous hinge at bottom, and spring tension cam lock or tumbler lock, keyed alike, at top, and refill sight slot in front.

2.4 COMBINATION PAPER TOWEL DISPENSER AND DISPOSAL UNITS

- A. // Recessed // and // semi-recessed // type.
- B. Dispensing capacity for 400 sheets of any type of paper toweling.
- C. Fabricate of stainless steel.
- D. Form face frames, from one piece.
- E. Provide each door with continuous stainless steel piano hinge and tumbler lock, keyed alike.
- F. Provide removable waste receptacle approximately 40 L (10.5 gal.) capacity, fabricated of 0.45 mm (0.02 inch) thick stainless steel.

2.5 WASTE RECEPTACLES

- A. Semi-recessed type, without doors. Fed. Spec. WW-P-541, Type II.
- B. Fabricate of stainless steel.
- C. Form face frame from one piece.
- D. Provide removable waste receptacle of approximately 45 L (12 gal.) capacity, fabricated of stainless steel.
- E. Waste receptacle key locked in place.

2.6 TOILET TISSUE DISPENSERS

- A. Double roll surface mounted type.
- B. Mount on continuous backplate.
- C. Removable spindle ABS plastic or chrome plated plastic.
- D. Wood rollers are not acceptable.

SPEC WRITER NOTE: Use the following paragraph for toilet tissue dispensers used in Mental Health and Behavioral Patient Care Units.

- E. Toilet Tissue Dispensers Used In Mental Health And Behavioral Patient Care Units: Soft plastic rod incapable of supporting load greater than 22.6 kg (50 pounds) with concealed or tamper resistant fasteners.

SPEC WRITER NOTE: See VA standard detail SD102800-1 for patient accessible roll in shower grab bars and SD102800-2 for

upswing grab bars. Upswinging grab bars often require structure inside the wall.
www.cfm.va.gov/TIL/sDetail.asp

2.7 GRAB BARS

- A. Fed. Spec. WW-P-541/8B, Type IV, bars, surface mounted, Class 2, grab bars and complying with ASTM F446.
- B. Fabricate from stainless steel or nylon coated steel, use one type throughout project:
 - 1. Stainless steel: Grab bars, flanges, mounting plates, supports, screws, bolts, and exposed nuts and washers.
 - 2. Nylon Coated Steel: Grab bars and flanges complete with mounting plates and fasteners. // Color as specified in Section 09 06 00, SCHEDULE FOR FINISHES. //
- C. Mounting:
 - 1. Floor Mounted Grab Bars: Exposed type.
 - 2. Swing Up Grab Bars: Exposed type.
 - 3. Metal // Toilet // Dressing // Shower // Partitions Mounted Grab Bars: Exposed type.
 - 4. Other Types and Locations: Concealed type.
- D. Bars:
 - 1. Fabricate to 38 mm (1-1/2 inch) outside diameter.
 - a. Stainless steel, minimum 1.2 mm (0.05 inch) thick.
 - b. Nylon coated bars, minimum 1.5 mm (0.06 inch) thick.
 - 2. Fabricate in one continuous piece with ends turned toward walls.
 - a. Swing up grab bars and grab bars continuous around three sides of showers may be fabricated in two sections, with concealed slip joint between.
 - 3. Continuously weld intermediate support to grab bar.
 - 4. Swing Up Bars: Manually operated; designed to prevent bar from falling when in raised position.
- E. Flange for Concealed Mounting:
 - 1. Minimum 2.65 mm (0.1 inch) thick, maximum 79 mm (3-1/8 inch) diameter by 13 mm (1/2 inch) deep, with minimum three set screws for securing flange to back plate.
 - 2. Insert grab bar through center of flange and continuously weld perimeter of grab bar flush to back side of flange.

3. In lieu of providing flange for concealed mounting, and back plate as specified, grab bar may be welded to back plate covered with flange.

F. Flange for Exposed Mounting:

1. Minimum 5 mm (3/16 inch) thick, maximum 79 mm (3-1/8 inch) diameter.
2. Insert grab bar through flange and continuously weld perimeter of grab bar flush to backside of flange.
3. Where mounted on // toilet // dressing // shower // partitions, provide three equally spaced, countersunk holes, sized to accommodate 5 mm (3/16 inch) diameter bolts.
4. Where mounted on floor, provide four equally spaced holes, sized to accommodate 5 mm (3/8 inch) diameter bolts, maximum 5 mm (3/8 inch) from edge of flange.

G. Back Plates:

1. Minimum 2.65 mm (0.1046 inch) thick metal.
2. Fabricate in one piece, maximum 6 mm (1/4 inch) deep, with diameter sized to fit flange. Provide slotted holes to accommodate anchor bolts.
3. Provide spreaders, through bolt fasteners, and cap nuts, where grab bars are mounted on partitions.

SPEC WRITER NOTE: Use the following paragraph for grab bars used in Mental Health and Behavioral Patient Care Units.

- H. Grab bars in Mental Health and Behavioral Patient Care Units: Provide units complying with accessibility standards, but preventing materials from being threaded between bar and wall as possible anchor point.

2.8 SHOWER CURTAIN RODS

- A. Stainless steel tubing, minimum 1.27 mm (0.050 inch) wall thickness, 32 mm (1-1/4 inch) outside diameter.
- B. Flanges, stainless steel rings, 66 mm (2.6 inch) minimum outside diameter, with 2 holes opposite each other for 6 mm (1/4 inch) stainless steel fastening bolts. Provide set screw within curvature of each flange for securing rod.

SPEC WRITER NOTE: Use intermediate support for intersection of rods or where bent rod occurs. Show on details.

- C. Intermediate Support: For rods over 1800 mm (72 inches) long. Provide adjustable ceiling flanges with set screws, tubular hangers and stirrups.

SPEC WRITER NOTE: Use the following paragraph for shower rods in Mental Health and Behavioral Nursing Units (Psychiatric).

- D. Shower curtain rods in Mental Health and Behavioral Nursing Units:
1. Chrome plated plastic rods capable of supporting 22.6 kg (50 pounds) before pulling free of wall flanges.
 2. Option: Ceiling mounted hospital cubicle curtain tracks as specified in Section 10 21 23, CUBICLE CURTAIN TRACKS, with break-away pendant chain hooks. Chain hooks located at 2000 mm (79 inches) above floor.

SPEC WRITER NOTE: Use terminology indicated on Drawings.

2.9 CLOTHES HOOKS, ROBE OR COAT

- A. Fabricate hook units from chromium plated brass with satin finish, or stainless steel, using 6 mm (1/4 inch) minimum thick stock, with edges and corners rounded smooth to thickness of metal, or 3 mm (1/8 inch) minimum radius.
- B. Fabricate each unit as a double hook on a single shaft, integral with or permanently fastened to wall flange, provided with concealed fastenings.

SPEC WRITER NOTE: Use the following paragraph for clothes hooks used in Mental Health and Behavioral Patient Care Units.

- C. Clothes Hooks Used In Mental Health And Behavioral Patient Care Units: Provide units free of anchor points and secured to the wall using tamper resistant hardware.

2.10 TOWEL BARS

- A. Fed. Spec. WW-P-541/8B, Type IV, Bar, Surface mounted; Class 1, towel.
- B. Stainless steel, or chromium plated copper alloy.
- C. Bar Length: 450 and 600 mm (18 and 24 inches) as shown.
- D. Finish brackets and supports to match bar.

SPEC WRITER NOTE: Use the following paragraph for towel bars used in Mental Health and Behavioral Patient Care Units.

E. Towel Bars Used in Mental Health and Behavioral Patient Care Units:

Design units to support maximum 1 kg (2 lbs.).

SPEC WRITER NOTE: See VA standard detail SD102800-3 for accessible lavatory with metal framed mirror.
www.cfm.va.gov/TIL/sDetail.asp

2.11 METAL FRAMED MIRRORS

A. Fed. Spec. A-A-3002 metal frame; // chromium finished steel, // anodized aluminum, // or // stainless steel //.

B. Mirror Glass:

1. Minimum 6 mm (1/4 inch) thick.
2. Set mirror in a protective vinyl glazing tape.

C. Frames:

1. Channel or angle shaped section with face of frame minimum 9 mm (3/8 inch) wide. Fabricate with square corners.
2. Metal Thickness 0.9 mm (0.035 inch).
3. Filler:
 - a. Where mirrors are mounted on walls having ceramic tile wainscots not flush with wall above, provide fillers contoured to conceal void between back of mirror and wall surface.
 - b. Fabricate fillers from same material and finish as mirror frame.
4. Attached Shelf for Mirrors:
 - a. Fabricate shelf of same material and finish as mirror frame.
 - b. Make shelf maximum 150 mm (6 inches) in depth, and extend full width of mirror.
 - c. Close ends and front edge of shelf to same thickness as mirror frame width.
 - d. Form shelf for aluminum framed mirror as integral part of bottom frame member.
 - e. Form stainless steel shelf with concealed brackets to attach to mirror frame.

D. Back Plate:

1. Fabricate backplate for concealed wall hanging from zinc-coated, or cadmium plated 0.9 mm (0.036 inch) thick sheet steel, die cut to fit face of mirror frame.
2. Provide set screw type theft resistant concealed fastening system for mounting mirrors.

E. Mounting Bracket:

1. Designed to support mirror tight to wall.
2. Designed to retain mirror with concealed set screw fastenings.

SPEC WRITER NOTE: Use the following paragraph for metal framed mirrors used in Mental Health and Behavioral Patient Care Units.

- F. Metal Framed Mirrors used in Mental Health and Behavioral Patient Care Units: Provide shatter proof glass or polished stainless steel units.

SPEC WRITER NOTE: Delete cabinet types not used. Ensure cabinets are detailed.

2.12 MEDICINE CABINETS

- A. Fed. Spec. WW-P-541/8B, Type III Medicine cabinets, Style R, Recessed.

1. Mirror Glass: Minimum 5 mm (3/16 inch) thick. Set mirror in protective vinyl glazing tape.
2. Glass Shelves: Minimum 6 mm (1/4 inch) thick, with bulb-edges at front. Support shelves on adjustable aluminum brackets. Provide three shelves for each cabinet.
3. Cabinet Body: Fabricate from 0.9 mm (0.036 inch) thick sheet steel, with baked enamel finish, or 0.9 mm (0.036 inch) thick stainless steel. Form body in one piece, without seams, and with rounded inside corners.

- B. Hinged Door:

1. Swing door.
2. Fabricate mirror door approximately 400 by 560 mm (16 by 22 inches).
3. Cabinet concealed when doors are closed.
4. Mirror Door Frame: Channel shape, 15 mm (0.060 inch) thick chromium plated brass, or 0.9 mm (0.036 inch) thick stainless steel.
5. Provide door with full length stainless steel piano hinge, magnetic or friction catches, rubber bumpers, and 90 degree restraining arm with spring type stop.

- C. Sliding Door:

1. Slide door.
2. Fabricate sliding doors for approximately 660 by 560 mm (26 by 22 inch) opening.
3. Provide nylon glides in stainless steel tracks, door pulls and rubber bumpers.
4. Entire contents of cabinet concealed when doors closed.

SPEC WRITER NOTE: Use the following paragraph for medicine cabinets used in Mental Health and Behavioral Patient Care Units.

- D. Medicine Cabinets in Mental Health and Behavioral Patient Care Units:
Provide shatter proof glass or polished stainless steel units.

2.13 FOOT OPERATED SOAP DISPENSER

- A. Wall mounted, liquid soap dispenser, designed with adjustable needle valve allowing dispensing of two milliliters of liquid with each depression of foot pump.
- B. Connect foot pump by 1800 mm (6 foot) air tube, to 1 liter (34 ounce) liquid container. Provide air intake tube with feature to prevent liquid from dripping after release of pedal.
- C. Operate pump by slip resistant, rubber padded, pedal.
- D. Provide complete unit not adversely affected by liquid soap, aseptic detergent, or hexachlorophene solutions.
- E. Provide removable gummed label, attached to container, stating soap or detergent is acceptable in dispensers.

2.14 SOAP DISHES

- A. Fed. Spec. WW-P-541/8B, Type VI, Holder.
- B. Class 1, Soap, Surface Mounted:
 - 1. One piece with provisions for exposed fasteners.
 - 2. Fabricate from chromium plated brass approximately 115 by 95 mm (4 1/2 by 3-3/4 inches) overall size with drainage openings at bottom.
- C. Soap, Recessed:
 - 1. One piece seamless shell and flange with provisions for concealed fasteners.
 - 2. Fabricate from 0.8 mm (0.031 inch) thick stainless steel or chromium plated brass.
 - 3. Form surface of soap tray with raised ridges or patterned dimples to provide gripping surface for soap bar, or provide flush soap tray with a retaining lip. Plastic soap trays or tray inserts are not acceptable.

SPEC WRITER NOTE: Use the following paragraph for soap dishes used in Mental Health and Behavioral Patient Care Units.

- D. Soap Dishes in Mental Health and Behavioral Patient Care Units: Provide recessed units.

2.15 PAPER CUP DISPENSER

- A. Fabricate of stainless steel.
- B. Provide door with concealed stainless steel pivoting rod or piano hinge, and spring tension cam lock, or tumbler lock, keyed alike when more than one accessory unit is provided, and with cup level refill sight slot in door front.
- C. Fabricate for flat bottom cups.
- D. 90 Milliliters (3 ounce) Dispenser Unit:
 - 1. Surface mounted single stack dispenser unit having a capacity of maximum one hundred fifty cups.
 - 2. Form door from one piece to cover front and sides warp free.
- E. 120 Milliliters (4 ounce) Dispenser Unit:
 - 1. Recessed type single stack dispenser unit having a capacity of Maximum one hundred cups.
 - 2. Form face frame in one piece.
 - 3. Fabricate door double-pan warp free.
- F. Combination 90 to 180 Milliliters (3 to 6 ounce) Dispenser and Disposal Unit:
 - 1. Recessed type, having a capacity of Maximum 170 cups.
 - 2. Fabricate as twin stack dispenser unit with adjustable dispensing mechanism to dispense any size cup.
 - 3. Fabricate face frames in one piece and doors double pan warp free.
 - 4. Fabricate recessed disposal unit with removable waste receptacle having a capacity of minimum 11 L (3.1 gallons).

2.16 MOP RACKS

- A. Minimum 1016 mm (40 inches) long with five holders.
- B. Clamps:
 - 1. Minimum of 1.3 mm (0.05 inch) thick stainless steel bracket retaining channel with hard rubber serrated cam; pivot mounted to channel.
 - 2. Clamps to hold handles from 13 mm (1/2 inch) minimum to 32 mm (1-1/4 inch) maximum diameter.
- C. Support:
 - 1. Minimum 1 mm (0.04 inch) thick stainless steel hat shape channel to hold clamps away from wall as indicated.
 - 2. Drill wall flange for 3 mm (1/8 inch) fasteners above and below clamp locations.

- D. Secure clamps to support with oval head machine screws or rivets into continuous reinforcing back of clamps.

SPEC WRITER NOTE: For details see standard detail SD102800-4.

2.17 STAINLESS STEEL SHELVES (TYPE 44)

A. Shelves:

1. Fabricate shelves of 1.2 mm (0.0478 inch) thick sheet to size and design indicated on Drawings.
2. Fabricate shelves of hollow metal type construction, forming a depressions indicated, with closed fronts, backs, ends and bottoms. Reinforce shelves with 1.2 mm (0.05 inch) thick sheet steel hat channel stiffeners, full depth, welded to underside of top at bracket locations.
3. Miter cuts, where made at corners of shelves, continuously welding.

- B. Form brackets of 3 mm (1/8 inch) thick steel as shown. Drill brackets for 6 mm (1/4 inch) anchor bolts.

- C. Weld or Screw brackets to shelves.

SPEC WRITER NOTE:

1. Verify details. Show location at lavatories and flushing rim service sinks.
2. See VA standard detail SD102800-4 for accessible lavatory with metal framed mirror. www.cfm.va.gov/TIL/sDetail.asp

2.18 STAINLESS STEEL SHELVES (TYPES // 45, // 45C //)

- A. Fabricate shelves and brackets to design shown of 1.2 mm (0.05 inch) thick stainless steel.
- B. Round and finish smooth projecting corners of shelves and edge corners of brackets. Drill brackets for 6 mm (1/4 inch) anchor bolts.
- C. Screw or weld brackets to shelves.

2.19 STAINLESS STEEL SHELVES AT WHEELCHAIR LAVATORY

A. Side wall mounted:

1. Fabricate to size and shape indicated of 1.2 mm (0.05 inch) thick sheet.
2. Turn up edges and weld corners closed.
3. Fabricate brackets and weld to shelf. Drill brackets for 6 mm (1/4 inch) anchor bolts.

B. Back wall mounted:

1. Fabricate to size and shape shown of plate and tube.

2. Turn up edges and weld corners of shelf.
3. Weld tube to back plate and shelf, weld back plate to shelf, filler plate to tube, and corners of shelf with continuous welds.
4. Drill back plate for 6 mm (1/4 inch) anchor bolts.

2.20 FABRICATION - GENERAL

- A. Welding, AWS D10.4.
- B. Grind, dress, and finish welded joints to match finish of adjacent surface.
- C. Form exposed surfaces from one sheet of stock, free of joints.
- D. Provide steel anchors and components required for secure installation.
- E. Form flat surfaces without distortion. Keep exposed surfaces free from scratches and dents. Reinforce doors to prevent warp or twist.
- F. Isolate aluminum from dissimilar metals and from contact with building materials as required to prevent electrolysis and corrosion.
- G. Hot-dip galvanized steel or stainless steel, anchors and fastening devices.
- H. Shop assemble accessories and package with components, anchors, fittings, fasteners and keys.
- I. Key items alike.
- J. Provide templates and rough-in measurements.
- K. Round and deburr edges of sheets to remove sharp edges.

2.21 FINISH

- A. Steel Paint Finish:
 1. Powder-Coat Finish: Manufacturer's standard two-coat finish system consisting of the following:
 - a. One coat primer.
 - b. One coat thermosetting topcoat.
 - c. Dry-film Thickness: 0.05 mm (2 mils) minimum.
 - d. Color: Refer to Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Nylon Coated Steel: Nylon coating powder formulated for fluidized bonding process to steel to provide hard smooth, medium gloss finish, minimum 0.3 mm (0.012 inch) thick, rated as self-extinguishing when tested according to ASTM D635.
- C. Stainless Steel: NAAMM AMP 500; No. 4 polished finish.
- D. Aluminum Anodized Finish: NAAMM AMP 500.
 1. Clear Anodized Finish: AA-C22A41; Class I Architectural, 0.018 mm (0.7 mil) thick.

2. Color Anodized Finish: AA-C22A42 or AA-C22A44; Class I Architectural, 0.018 mm (0.7 mil) thick.

E. Chromium Plating: ASTM B456, satin or bright as specified, Service Condition No. SC2.

2.22 ACCESSORIES

A. Fasteners:

1. Fasteners in Mental Health and Behavioral Patient Care Units: Tamper resistant hot-dipped galvanized or stainless steel.
2. Exposed Fasteners: Stainless steel or chromium plated brass, finish to match adjacent surface.
3. Concealed Fasteners:
 - a. Shower, Bath Tubs, and High Moisture Areas: Stainless steel.
 - b. Other Locations: Steel, hot-dipped galvanized.
4. Toggle Bolts: For use in hollow masonry or frame construction.
5. Sex bolts: For through bolting on thin panels.
6. Expansion Shields: Lead or plastic for solid masonry and concrete substrate as recommended by accessory manufacturer to suit application.
7. Screws:
 - a. ASME B18.6.4.
 - b. Fed. Spec. FF-S-107, Stainless steel Type A.

B. Adhesive: As recommended by manufacturer to suit application.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine and verify substrate suitability for product installation.
 1. Verify blocking to support accessories is installed and located correctly.
- B. Verify location of accessories with Contracting Officer's Representative.
- C. //Provide labor or prep as required for VA-furnished and contractor installed or VA-furnished and installed components.//

3.2 INSTALLATION

- A. Install products according to manufacturer's instructions // and approved submittal drawings //.
 1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.
- B. Install grab bars according to ASTM F446.

- C. Set work accurately, in alignment and where indicated, parallel or perpendicular as required to line and plane of surface. Install accessories plumb, level, free of rack and twist.
- D. Toggle bolt to steel anchorage plates in frame partitions and hollow masonry. // Expansion bolt to concrete or solid masonry. //
- E. Install accessories to function as designed. Perform maintenance service without interference with performance of other devices.
- F. Position and install dispensers, and other devices in countertops, clear of drawers, permitting ample clearance below countertop between devices, and ready access for maintenance.
- G. Align mirrors, dispensers and other accessories even and level, when installed in battery.
- H. Install accessories to prevent striking by other moving, items or interference with accessibility.

SPEC WRITER NOTE: Use the following paragraph for fasteners used in Mental Health and Behavioral Patient Care Units.

- I. Install accessories in Mental Health and Behavioral Units with tamper resistant screws that are flush mounted so that they will not support a rope or material for hanging.

3.3 CLEANING

- A. After installation, clean toilet accessories according to manufacturer's instructions.

3.4 PROTECTION

- A. Protect accessories from damage until project completion.

SPEC WRITER NOTE:

- 1 Location of accessories may be scheduled (if necessary) at end of this section, however accessories must be shown on floor plans and toilet and bathroom elevations.
- 2 When accessories are identified and located on drawings by numbers and letters, place full descriptive title of accessory with drawing symbol in the schedule.
- 3 Coordinate terminology used in this section with drawing terminology.

3.5 SCHEDULE OF ACCESSORIES

Item	Description	Mounting	Material

- - E N D - -