# **SECTION 10155 - TOILET COMPARTMENTS**

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes baked-enamel units as follows:
  - 1. Toilet Enclosures: Floor anchored.
  - 2. Entrance Screens: Floor anchored.
  - 3. Urinal Screens: Wall hung.
- B. Related Sections include the following:
  - 1. Division 6 Section "Rough Carpentry" for blocking.
  - 2. Division 10 "Toilet and Bath Accessories" for toilet tissue dispensers, grab bars and similar accessories.

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. Show locations of cutouts for compartment-mounted toilet accessories.
  - 2. Show locations of reinforcements for compartment-mounted grab bars.
- C. Samples for Initial Selection: For each type of unit indicated.

# 1.4 QUALITY ASSURANCE

A. Comply with requirements in CID-A-A-60003, "Partitions, Toilets, Complete."

## 1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating toilet compartments without field measurements. Coordinate wall, floor, ceilings, and other contiguous construction to ensure that actual dimensions correspond to established dimensions.

# PART 2 - PRODUCTS

#### 2.1 METAL UNITS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Accurate Partitions Corporation.
  - 2. All American Metal Corp.
  - 3. American Sanitary Partition Corporation.
  - 6. Flush Metal Partition Corp.
  - 8. Global Steel Products Corp.
  - 9. Sanymetal; a Crane Plumbing Company.
- B. Baked-Enamel Units: Facing sheets and closures fabricated from ASTM A 591/A 591M, 80Z (24G) (electrolytically zinc-coated) or ASTM A 653/A 653M (hot-dip galvanized or galvannealed), commercial steel sheet for exposed applications, that is mill phosphatized, and selected for smoothness.
  - 1. Facing Sheet Thicknesses: Minimum base-metal (uncoated) thicknesses as follows:
    - a. Pilasters, Unbraced at One End: Manufacturer's standard thickness, but not less than 0.0438 inch.
    - b. Panels: Manufacturer's standard thickness, but not less than 0.0269 inch.
    - c. Doors: Manufacturer's standard thickness, but not less than 0.0269 inch.
    - d. Integral-Flange, Wall-Hung Urinal Screens: Manufacturer's standard thickness, but not less than 0.0269 inch.
  - 2. Finish: Manufacturer's standard pigmented, organic coating, including thermosetting, electrostatically applied, and powder coatings. Provide coating system that complies with coating manufacturer's written instructions for pretreatment, application, baking, and minimum dry film thickness.
    - a. Color: One color in each room as selected by Architect from manufacturer's full range of colors.
- C. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets are pressure laminated to core material. Units have continuous, interlocking molding strip or lapped and formed edge closures. Exposed surfaces are free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections. Corners are sealed by welding or clips. Exposed welds are ground smooth.

- 1. Core Material: Manufacturer's standard sound-deadening honeycomb of resinimpregnated kraft paper in thickness required to provide finished thickness of 1 inch for doors and panels and 1-1/4 inches for pilasters.
- 2. Grab-Bar Reinforcement: Provide concealed internal reinforcement for grab bars mounted on units
- 3. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.
- 4. Urinal-Screen Construction: Similar to panels, with integral full-height flanges for wall attachment, and maximum 1-1/4 inches (32 mm) thick.
- D. Pilaster Shoes: Stainless steel, ASTM A 666, Type 302 or 304, not less than 0.0312 inch specified thickness and 3 inches (75 mm) high, finished to match hardware.
- E. Brackets (Fittings):
  - 1. Stirrup Type: Ear or U-brackets, stainless steel.

## 2.2 ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
  - 1. Material: Stainless steel.
- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match hardware, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use hot-dip galvanized or other rust-resistant, protective-coated steel.

# 2.3 FABRICATION

- A. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- B. Doors: Unless otherwise indicated, 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 accessible to people with disabilities.
  - 1. Hinges: Manufacturer's standard self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees.
  - 2. Latch and Keeper: Manufacturer's standard recessed latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be accessible to people with disabilities.
  - 3. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.
  - 4. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.

5. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with accessibility requirements of authorities having jurisdiction. Provide units on both sides of doors at compartments indicated to be accessible to people with disabilities.

#### PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
  - 1. Maximum Clearances:
    - a. Pilasters and Panels: 1/2 inch.
    - b. Panels and Walls: 1 inch.
  - 2. Stirrup Brackets: Secure panels to walls and to pilasters with not less than three brackets attached at midpoint and near top and bottom of panel.
    - a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.
    - b. Align brackets at pilasters with brackets at walls.
- B. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches into structural floor, unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.
- C. Wall-Hung Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb and to resist lateral impact.

## 3.2 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doorsto return doors to fully closed position.

**END OF SECTION** 

#### SECTION 10200 - LOUVERS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Fixed elevator shaft louver. Elevator shaft louver with mechanical damper is specified in mechanical specifications sections.
  - 2. Mechanical room louvers.
  - 3. Screens and blank-off panels for louvers.
- B. Related Sections include the following:
  - 1. Division 7 Section "Joint Sealants" for sealants installed in perimeter joints between louver frames and adjoining construction.
  - 2. Division 15 Sections for louvers that are a part of mechanical equipment.

#### 1.3 DEFINITIONS

- A. Louver Terminology: Definitions of terms for metal louvers contained in AMCA 501 apply to this Section, unless otherwise defined in this Section or in referenced standards.
- B. Standard Free Area: Free area of a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.
- C. Maximum Standard Airflow: Airflow at point of beginning water penetration through a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.
- D. Drainable-Blade Louver: Louver designed to collect and drain water to exterior at sill by means of gutters in front edges of blades and channels in jambs and mullions.

## 1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide exterior metal louvers capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of louver components including blades, frames, and supports; noise or metal fatigue caused by louver blade rattle or flutter; or permanent damage to fasteners and anchors.

- 1. Wind Load: Uniform pressure (velocity pressure) of 30 lbf/sq. ft. (1440 Pa), acting inward or outward
- 2. Thermal Movements: Provide louvers that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, and other detrimental effects:
  - a. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- B. Air-Performance, Water-Penetration, and Air-Leakage Ratings: Provide louvers complying with performance requirements indicated, as demonstrated by testing manufacturer's stock units 48 inches (1220 mm) wide by 48 inches (1220 mm) high. Test units according to AMCA 500.
  - 1. Perform testing on unpainted, cleaned, degreased units.
  - 2. Perform water-penetration testing on louvers without screens.

## 1.5 SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Shop Drawings: For louver units and accessories. Include plans; elevations; sections; and details showing profiles, angles, and spacing of louver blades. Show unit dimensions related to wall openings and construction; free area for each size indicated; profiles of frames at jambs, heads, and sills; and anchorage details and locations.
- C. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for units with factory-applied color finishes.
- D. Samples for Verification: Of each type of metal finish required, prepared on Samples of same thickness and material indicated for final Work. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.
- E. Product Certificates: Signed by manufacturers of louvers certifying that the products furnished comply with requirements and are licensed to bear the AMCA seal based on tests made according to AMCA 500 and complying with AMCA's Certified Ratings Program.

## 1.6 QUALITY ASSURANCE

- A. Welding Standards: As follows:
  - 1. Comply with AWS D1.2, "Structural Welding Code--Aluminum."
  - 2. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- B. SMACNA Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" recommendations for fabrication, construction details, and installation procedures.

## 1.7 PROJECT CONDITIONS

A. Field Measurements: Verify louver openings by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or an approved equal:
  - 1. Air Louvers Inc.
  - 2. Airolite Co.
  - 3. Buckley Associates, Hanover MA
  - 4. Construction Specialties, Inc.
  - 5. Greenheck Company
  - 6. Hart & Cooley, Inc.; Reliable Metal Products Division.
  - 7. Ruskin Manufacturing; Tomkins Industries, Inc.

## 2.2 MATERIALS

- A. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy 6063-T5 or T-52.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer for required finish.
- C. Aluminum Castings: ASTM B 26/B 26M, alloy 319.
- D. Glass: Clear single pane breakable glass.
- E. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are incompatible with joined materials.
  - 1. Use types and sizes to suit unit installation conditions.
  - 2. Use Phillips flat-head screws for exposed fasteners, unless otherwise indicated.
- F. Anchors and Inserts: Of type, size, and material required for loading and installation indicated. Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as needed for corrosion resistance. Use toothed steel or expansion bolt devices for drilled-in-place anchors.
- G. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 but containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D 1187.

# 2.3 FABRICATION, GENERAL

- A. Assemble louvers in factory to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- B. Maintain equal louver blade spacing to produce uniform appearance.
- C. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining materials' tolerances, and perimeter sealant joints.
- D. Include supports, anchorages, and accessories required for complete assembly.
- E. Provide vertical mullions of type and at spacings indicated, but not more than recommended by manufacturer, or 72 inches (1830 mm) o.c., whichever is less. At horizontal joints between louver units, provide horizontal mullions, unless continuous vertical assemblies are indicated.
- F. Provide sill extensions and loose sills made of same material as louvers where indicated or required for drainage to exterior and to prevent water penetrating to interior.
- G. Join frame members to one another and to fixed louver blades with fillet welds concealed from view, unless otherwise indicated or size of louver assembly makes bolted connections between frame members necessary.

# 2.4 FIXED, EXTRUDED-ALUMINUM LOUVERS

- A. Weather louver designed to protect air intake and exhaust openings in building exterior walls. Design incorporates drain gutters in the head member and horizontal blades to channel water to the louver side frames or jambs where water is further channeled through vertical downspouts and out at the sloped louver sill. Provide Model ESD-403 by Greenheck or louver by other listed manufacturer with the same features. For louvers installed in masonry, provide sills as frames as required for installation.
- B. Provide High Performance Drainable Blade Louver with the following features:
- C. Frame: Heavy gauge 6063T5 extruded aluminum, 4" x .081" nominal dimensions. Welded construction.
- D. Blades: Drainable design, 6063T5 extruded aluminum, .125" nominal wall thickness, positioned at approximately 4" centers. Provide angle support angles and blade support brackets at rear of blades as required, but at least 4'-0" on center.
- E. Flanged frame and extended sills, where indicated or where required for installation.

## 2.5 LOUVER SCREENS

A. General: Except where louvers are used for acoustic and visual screening only, provide each exterior louver with louver screens complying with the following requirements:

- 1. Screen Location for Fixed Louvers: Interior face.
- 2. Screening Type: Bird screening, unless otherwise indicated.
- B. Secure screens to louver frames with stainless-steel machine screws, spaced a maximum of 6 inches (150 mm) from each corner and at 12 inches (300 mm) o.c.
- C. Louver Screen Frames: Fabricate screen frames with mitered corners to louver sizes indicated and to comply with the following requirements:
  - 1. Metal: Same kind and form of metal as indicated for louver to which screens are attached.
    - a. Reinforce extruded-aluminum screen frames at corners with clips.
  - 2. Finish: Same finish as louver frames to which louver screens are attached.
- D. Type: Louver Screening for Aluminum Louvers:
  - 1. Bird Screening: Aluminum, 1/2-inch- (12.7-mm-) square mesh, 0.063-inch (1.6-mm) wire.
  - 2. U-shaped frames for permanently securing screen mesh.

# 2.6 BLANK-OFF PANELS

- A. General: Fabricate blank-off panels from materials and to sizes indicated and comply with the following requirements:
  - 1. Finish: Same as finish applied to louvers, but black color.
  - 2. Attach blank-off panels to back of louver frames with clips.
  - 3. Attach blank-off panels to back of louver frames with stainless-steel sheet-metal screws.
- B. Insulated, Blank-Off Panels: Laminated panels consisting of insulating core surfaced on back and front with metal sheets and attached to back of louver.
  - 1. Thickness: 2 inches.
  - 2. Metal Facing Sheets: Aluminum sheet, not less than 0.032-inch nominal thickness.
  - 3. Insulating Core: Extruded-polystyrene foam.
  - 4. Edge Treatment: Trim perimeter edges of blank-off panels with louver manufacturer's standard extruded-aluminum-channel frames, not less than 0.080-inch nominal thickness, with corners mitered and with same finish as panels.
  - 5. Seal perimeter joints between panel faces and louver frames with gaskets or sealant.
  - 6. Panel Finish: Same type of finish applied to louvers, but black color.
  - 7. Attach blank-off panels with clips.

# 2.7 ELEVATOR SHAFT LOUVER

- A. Elevator shaft louver shall be Louvers shall be Buckley Elevator Shaft Louver Model EAL4-ES, or louver by other listed manufacturer with the same features. Typical Elevator Shaft Louver is 2/3 glass and 1/3 louver, with louver in center with equal glass portions on either side.
- B. Construction:

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- 1. Size: 36" wide by 1'2" high unless otherwise so indicated.
- 2. Frame: 0.085 Extruded Aluminum
- 3. Glass: Single pane breakable
- 4. Flanged.
- 5. Finish color as selected by Architect.
- 6. Drainable blade louver EAL-2

## 2.8 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish louvers after assembly.

## 2.9 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with system established by the Aluminum Association for designating aluminum finishes.
- B. Finish louvers after assembly.
- C. Baked Enamel Finish for Exterior Louvers and Frames: Manufacturer's 5-stage pre-treatment process followed by baked enamel finish.
  - 1. Color and Gloss: Match Architect's samples.

## PART 3 - EXECUTION

#### 3.1 PREPARATION

A. Coordinate Setting Drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

# 3.2 INSTALLATION

- A. Locate and place louver units level, plumb, and at indicated alignment with adjacent work.
- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
- C. Form closely fitted joints with exposed connections accurately located and secured.
- D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.

- E. Repair finishes damaged by cutting, welding, soldering, and grinding. Restore finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.
- F. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
- G. Install concealed gaskets, flashings, joint fillers, and insulation, as louver installation progresses, where weathertight louver joints are required. Comply with Division 7 Section "Joint Sealants" for sealants applied during louver installation.

# 3.3 ADJUSTING, CLEANING, AND PROTECTING

- A. Test operation of adjustable louvers and adjust as needed to produce fully functioning units that comply with requirements.
- B. Periodically clean exposed surfaces of louvers and vents that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
- C. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.
- D. Protect louvers and vents from damage during construction. Use temporary protective coverings where needed and approved by louver manufacturer. Remove protective covering at the time of Substantial Completion.
- E. Restore louvers and vents damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.
  - 1. Clean and touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

**END OF SECTION** 

SECTION 10431 - SIGNS

## PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplemental General Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Interior panel signs scope of work: Interior panel signs are indicated in a schedule at the end of this Section, and are required at every door opening in the new construction. For each unique sign number on the schedule, provide one sign according to Part 2 requirements. Drawings indicating final wall mounting locations will be issued to the contractor at the conclusion of review of submittals.
- B. Related Sections include the following:
  - 1. Division 1 Section "Temporary Facilities" for temporary project identification signs.
  - 2. Division 2 Sections for exterior site signs.
  - 3. Division 14 Section "Elevators" for code-required elevator signage.
  - 4. Division 15 Sections for labels, tags, and nameplates for mechanical equipment.
  - 5. Division 16 Sections for labels, tags, and nameplates for electrical equipment.
  - 6. Division 16 Sections for illuminated exit signs.

## 1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of sign.
- B. Shop Drawings: Include plans, elevations, and large-scale sections of typical members and other components. Show mounting methods, grounds, mounting heights, layout, spacing, reinforcement, accessories, and installation details.
  - 1. Provide message list for each sign, including large-scale details of wording, lettering, and Braille layout.
- C. Samples for Initial Selection: For each type of sign material indicated that involves color selection.
- D. Samples for Verification: For each type of sign, include the following Samples to verify color selected:
  - 1. Panel Signs: Full-size Samples of each type of sign required.

E. Qualification Data: For Installer.

## 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each sign type through one source from a single manufacturer.
- B. Regulatory Requirements: Comply with the Americans with Disabilities Act (ADA) and with code provisions as adopted by authorities having jurisdiction.

#### 1.5 PROJECT CONDITIONS

A. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement before fabrication and indicate measurements on Shop Drawings.

#### 1.6 COORDINATION

A. For signs supported by or anchored to permanent construction, advise installers of anchorage devices about specific requirements for placement of anchorage devices and similar items to be used for attaching signs.

## PART 2 - PRODUCTS

- 2.1 Manufacturers: Subject to compliance with requirements, provide products by bone of the following:
  - A. Manufacturers of Signs:
    - 1. APCO Graphics, Inc.
    - 2. ASI Sign Systems, Inc.
    - 3. Mohawk Sign Systems.
    - 4. Nelson-Harkins Industries.
    - 5. Vomar Products, Inc.

# 2.2 INTERIOR PANEL SIGNS

- A. General: Provide panel signs that comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
  - 1. Produce smooth panel sign surfaces constructed to remain flat under installed conditions within tolerance of plus or minus 1/16 inch measured diagonally.
- B. Cast-Acrylic Sheet: Manufacturer's standard and as follows:
  - 1. Color: As selected by Architect from manufacturer's full range.

C. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to comply with the following requirements:

1. Edge Condition: Square cut.

- 2. Corner Condition: Square.
- D. Graphic Content and Style: Provide sign copy that complies with requirements indicated on artwork supplied on electronic media by Architect for size, style, spacing, content, mounting height and location, material, finishes, and colors of signage.
- E. Changeable Message Inserts: Fabricate signs to allow insertion of changeable messages in the form of transparent covers with paper inserts printed by Owner.
  - 1. Furnish paper and software for creating text and symbols for IBM compatible computers for Owner production of paper inserts.
  - 2. Furnish paper cut-to-size for changeable message insert.
- F. Tactile and Braille Copy: Manufacturer's standard process for producing copy complying with ADA Accessibility Guidelines and ICC/ANSI A117.1. Text shall be accompanied by Grade 2 braille. Produce precisely formed characters with square cut edges free from burrs and cut marks.
  - 1. Panel Material: Opaque acrylic sheet.
  - 2. Raised-Copy Thickness: Not less than 1/32 inch.
- G. Applied Copy and Graphics:
  - 1. Size: 8" square.
  - 2. Font: Helvetica medium unless otherwise indicated.
  - 3. Application: Silk-screened paint.

## 2.3 ACCESSORIES

- A. Mounting Methods:
  - 1. For Interior Panel Signs: Use double-sided vinyl tape, fabricated from materials that are not corrosive to sign material and mounting surface.
- B. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Furnish concealed inserts, as required, to be set into concrete or masonry work.

# 2.4 FINISHES, GENERAL

- A. Protect mechanical finishes on exposed surfaces from damage by applying strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of range of approved Samples. Noticeable variations in

same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of approved Samples and are assembled or installed to minimize contrast.

#### PART 3 - EXECUTION

# 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items provided under other sections of Work are sized and located to accommodate signs.
- C. Examine supporting members to ensure that surfaces are at elevations indicated or required to comply with authorities having jurisdiction and are free from dirt and other deleterious matter.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 INSTALLATION

- A. General: Locate signs and accessories where indicated, using mounting methods of types described and in compliance with manufacturer's written instructions.
  - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using methods indicated below:
  - 1. Vinyl-Tape Mounting: Use permanent bonding double-sided foam tape to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.

## 3.3 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

## 3.4 SIGN SCHEDULE

- A. Type A Signs: Room identification signs for offices, meeting rooms, mechanical and service rooms, storage areas.
  - 1. Mounting: 60 A.F.F.; on wall 3" clear between frame; high-bond adhesive.
  - 2. Material: Plastic through-colored.
  - 3. Size: 8"x8"
  - 4. Corners: Non-radius, eased edges.
  - 5. Text: Helvetica Medium, all caps, raised 1/32"; two cap sizes (3/4" and 5/8").
  - 6. Braille text: Grade 2 domed Braille to match background color where required.

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- 7. Color: Select from standard color chart.
- 8. Symbols: At toilet rooms; allow one custom symbol.
- 9. Quantity: 1 per Room.

END OF SECTION

#### SECTION 10506 - WOOD LOCKERS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Wood lockers with solid wood doors. Transparent finish is required for First Floor lockers, painted finish is required for Second Floor lockers.

## 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for wood lockers.
- B. Shop Drawings: For wood lockers. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Show details full size.
  - 2. Show wood locker fillers, trim, base, sloping tops, and accessories.
  - 3. Show wood locker numbering sequence.
- C. Samples for Initial Selection: For the following:
  - 1. Factory-applied transparent and painted finishes.
- D. Samples for Verification: For the following:
  - 1. Wood-faced panels with transparent finish, not less than 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish as specified.

## 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain wood lockers and accessories from single source from single manufacturer.

C. Regulatory Requirements: Where wood lockers are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities."

## 1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver wood lockers until painting and similar operations that could damage wood lockers have been completed in installation areas. If wood lockers must be stored in other-than-installation areas, store only in areas where environmental conditions are same as that in final installation location and comply with requirements specified in "Project Conditions" Article.

## 1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install wood lockers until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature between 60 and 90 deg F and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Verify actual dimensions of concealed framing, blocking, and reinforcements that support wood lockers by field measurements before fabrication.

## 1.7 COORDINATION

- A. Coordinate sizes and locations of concealed wood support bases.
  - 1. Requirements are specified in Division 6 Section "Rough Carpentry."
- B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that wood lockers can be supported and installed as indicated.

#### PART 2 - PRODUCTS

# 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following or approved equal:
  - 1. Hollman, Inc.

## 2.2 MATERIALS

A. Solid Wood: Clear hardwood lumber, selected for compatible grain and color.

- B. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, Type I, made with adhesive containing no urea formaldehyde.
- C. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.
  - 1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as indicated on Drawings.
  - 2. Provide toothed-steel or lead-expansion sleeves for drilled-in-place anchors.
- E. Wood Support Base: Lumber treated with manufacturer's standard preservative-treatment, process.

## 2.3 LOCKERS

- A. Provide lockers as indicated and as follows:
  - 1. Sizes: As indicated on drawings.
  - 2. Base and top: As indicated on drawings.
  - 3. Interior: Two hooks.
  - 4. Door Style: "Shaker" style with rectangular solid wood stiles and rails and flat center panel without moldings.
  - 5. Wood Species:
    - a. At vestibule of historic library: Red Oak, (Quercus rubra) quarter sawn, stained to match existing woodwork.
    - b. At garden level vestibule in new construction: Any closed grain hardwood.
  - 6. Finish:
    - a. At vestibule of historic library: Satin transparent finish.
    - b. At garden level vestibule in new construction: Manufacturer's opaque finish in color and level of gloss to match Architect's sample.
  - 7. Locks: Keyless mechanical lock with four digit combinations set by user and master key for management over-ride. Finish as selected by Architect.
  - 8. Number Plates: Finish as selected by Architect.

#### 2.4 FABRICATION

- A. Fabricate each wood locker with individual door and frame, an individual top, a bottom, and a back, and with common intermediate uprights separating compartments.
  - 1. Fabricate wood lockers to dimensions, profiles, and details indicated.
  - 2. Ease edges of corners of solid wood members to 1/16-inch radius.

- B. Fabricate components square, rigid, without warp, and with finished faces flat and free of scratches and chips. Accurately machine components for attachments in factory. Make joints tight and true.
  - 1. Fabricate wood lockers using manufacturer's standard construction with joints made with dowels, dados, or rabbets. Dado side panels to receive shelving except where indicated to be adjustable.
- C. Number Plates: Inlay number plates flush in each wood locker door, near top, centered.
- D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

#### 2.5 FACTORY FINISHES FOR WOOD-FACED WOOD LOCKERS

- A. General: Finish wood lockers at factory as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- B. Preparations for Finishing: Sand, fill countersunk fasteners, seal concealed surfaces, and perform similar preparations for finishing wood lockers, as applicable to each unit of the Work.
  - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood lockers. Apply two coats to back of paneling and to end-grain surfaces.
  - 2. Transparent Finish: Manufacturer's standard two-coat, clear, catalyzed lacquer finish with sanding between coats. Seal with moisture-resistant topcoat.
  - 3. Stain: Match Architect's sample.

# PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine walls, floors, and support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting wood locker installation.
- B. Verify that furring is attached to concrete and masonry walls that are to receive wood lockers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 PREPARATION

A. Condition wood lockers to average prevailing humidity conditions in installation areas before installation.

B. Before installing wood lockers, examine factory-fabricated work for completeness and complete work as required, including removal of packing.

#### 3.3 INSTALLATION

- A. Install wood support base.
- B. Assemble knocked-down wood lockers with manufacturer's standard fasteners, with no exposed fasteners on face frames.
- C. Install wood lockers level, plumb, and true; use concealed shims.
- D. Connect groups of wood lockers together with manufacturer's standard brass-finished fasteners, through predrilled holes, with no exposed fasteners on face frames. Fit wood lockers accurately together to form flush, tight, hairline joints.
- E. Install wood lockers without distortion so doors fit openings properly and are accurately aligned. Adjust hardware to center doors in openings, providing unencumbered operation. Complete installation of hardware and accessory items as indicated.
  - 1. Installation Tolerance: No more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line. Shim as required with concealed shims.
  - 2. Fasten wood lockers through back, near top and bottom, at ends with spaced not more than 16 inches o.c.
  - 3. Fasten wood lockers through wood locker base, at ends, and not more than 36 inches o.c. with wood screws sized for 1-inch penetration into wood base.
- F. Scribe and cut corner and filler panels to fit adjoining work using fasteners concealed where practical. Repair damaged finish at cuts.
- G. Install number plates after wood lockers are in place.
  - 1. Attach number plate on each wood locker door, near top, centered, with at least two screws with finish matching number plate.

## 3.4 ADJUSTING, CLEANING, AND PROTECTING

- A. Clean, lubricate, and adjust hardware. Adjust doors to operate easily without binding. Verify that integral locking devices operate properly.
- B. Protect wood lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.
- C. Touch up marred finishes, or replace wood lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by wood locker manufacturer.

**END OF SECTION** 

#### SECTION 10520 - FIRE-PROTECTION SPECIALTIES

## PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Portable fire extinguishers, scheduled at the end of this Section.
  - 2. Fire-protection cabinets, as indicated on the drawings

# 1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire-protection cabinets.
  - 1. Fire Extinguishers: Include rating and classification.
  - 2. Fire-Protection Cabinets: Include roughing-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style.
- B. Samples for Verification: For each type of exposed factory-applied color finish required for fire-protection cabinets, prepared on Samples of size indicated below.
  - 1. Size: 6 by 6 inches square.
- C. Maintenance Data: For fire extinguishers and fire-protection cabinets to include in maintenance manuals.

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain fire extinguishers and fire-protection cabinets through one source from a single manufacturer.
- B. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- C. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

D. Fire-Rated Fire-Protection Cabinets: Listed and labeled to comply with requirements of ASTM E 814 for fire-resistance rating of walls where they are installed.

#### 1.5 COORDINATION

A. Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.

#### PART 2 - PRODUCTS

# 2.1 MANUFACTURERS

- A. Provide products of the following manufacturers or approved equal for fire-protection products:
  - 1. JL Industries.
  - 2. Larsen's Manufacturing Company.
  - 3. Potter Roemer; Div. of Smith Industries, Inc.

#### 2.2 FIRE PROTECTION CABINET MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.

# 2.3 PORTABLE FIRE EXTINGUISHERS

- A. Basis-of-Design Fire Extinguishers: The design for fire extinguishers is based on the products named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified, or approved equal.
- B. Multipurpose Dry-Chemical Type in Steel Container: Capacity as indicated in schedule at the end of this Section, with monoammonium phosphate-based dry chemical in enameled-steel container.

## 2.4 FIRE-PROTECTION CABINETS

- A. Basis-of-Design Cabinets: The design for cabinets is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.
  - 1. Potter-Roemer "Alta" extinguisher cabinet series, solid flush steel panel door for field finish.
    - a. Cabinet types required: Trimless style unless semi-recessed (2" projection) is required because of the diameter of the specified extinguisher.
  - 2. Cabinet size: Coordinate cabinet size with required extinguisher.

3. Fire Rating: Provide fire-rated cabinets where units are to be installed in rated wall construction.

#### 2.5 FABRICATION

- A. Fire-Protection Cabinets: Provide manufacturer's standard box (tub), with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.
- B. Cabinet Doors: Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles selected.
  - 1. Fabricate door frames with tubular stiles and rails and hollow-metal design, minimum 1/2 inch thick.
  - 2. Miter and weld perimeter door frames.
- C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

# 2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire-protection cabinets after assembly.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## 2.7 STEEL FINISHES

- A. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond using manufacturer's standard methods.
- B. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils.

#### PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine roughing-in for cabinets to verify actual locations of piping connections before cabinet installation.
- B. Examine walls and partitions for suitable framing depth and blocking where semi-recessed cabinets will be installed.
- C. Examine fire extinguishers for proper charging and tagging.
  - 1. Remove and replace damaged, defective, or undercharged units.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

A. Prepare recesses for fire-protection cabinets as required by type and size of cabinet and trim style.

## 3.3 INSTALLATION

- A. General: Install specialties in locations and at mounting heights indicated and in compliance with manufacturer's recommendations. Do not compromise rating of walls into which specialties are mounted.
- B. Fire-Protection Cabinets: Fasten fire-protection cabinets to structure, square and plumb.
  - 1. Fasten mounting brackets to inside surface of fire-protection cabinets, square and plumb.

## 3.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as fire-protection specialties are installed, unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire-protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes, or replace fire-protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire-protection cabinet manufacturer.

E. Replace fire-protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

#### 3.5 FIRE EXTINGUISHER SCHEDULE

- A. All fire extinguisher cabinets locations and types are indicated on the architectural drawings. This schedule indicates the number and sizes of the extinguishers at each floor.
- B. Building area coverage: Per NFPA 10 standards for Ordinary Hazard, extinguishers shall have one unit of "A" per 1,500 gross square feet of building area, and maximum travel distance of 75'.
  - 1. Distribution: Where two sizes of extinguishers are scheduled at one building level, locate larger units adjacent to exit stairs at ends of the floor, and locate smaller unit at central occupied area of the floor.
- C. Fire extinguisher types: Multipurpose Dry-Chemical Type in Steel Container: UL-rated 2-A:10-B:C, 5-lb or 3-A:40-B:C, 6-lb nominal capacity as scheduled, with monoammonium phosphate-based dry chemical in enameled-steel container.

# D. SCHEDULE

Floor	Gross SF	Required "A"	Designed "A"	Extinguisher quantity & size
Penthouse	780	0.52	2A	One Unit @ 2A:10B:C
Second	7,970	5.13	6A	Two Units @ 3A:40B:C
Mezzanine	1,356	0.90	2A	One Unit @ 2A:10B:C
First	8,097	5.40	6A	Two Units @ 3A:40B:C
Garden	7,799	5.19	6A	Two Units @ 3A:40B:C
Basement	2,146	1.43	2A	One Unit @ 2A:10B:C

**END OF SECTION** 

## SECTION 10801 - TOILET AND CUSTODIAL ACCESSORIES

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Toilet accessories.
  - 2. Underlayatory guards.
- B. Related Sections include the following:
  - 1. Division 8 Section "Glazing" for frameless mirrors.
  - 2. Division 9 Section "Ceramic Tile" for ceramic wall tile.
  - 3. Division 10 Section "Toilet Compartments" for compartments and screens.

## 1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions and thicknesses, dimensions, profiles, fastening and mounting methods, specified options, and finishes for each type of accessory specified.
- B. Setting Drawings: For cutouts required in other work; include templates, substrate preparation instructions, and directions for preparing cutouts and installing anchoring devices.
- C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required. Use designations indicated in the Toilet and Bath Accessory Schedule and room designations indicated on Drawings in product schedule.

## 1.4 QUALITY ASSURANCE

- A. Source Limitations: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise approved by Architect.
- B. Product Options: Accessory requirements, including those for materials, finishes, dimensions, capacities, and performance, are established by specific products indicated in the Toilet Accessory Schedule.
  - 1. Products of other manufacturers listed in Part 2 with equal characteristics, as judged solely by Architect, may be provided.
  - 2. Do not modify aesthetic effects, as judged solely by Architect, except with Architect's

approval. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.

## 1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning, and servicing of accessories.

## 1.6 WARRANTY

- A. General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Manufacturer's Mirror Warranty: Written warranty, executed by mirror manufacturer agreeing to replace mirrors that develop visible silver spoilage defects within minimum warranty period indicated.
  - 1. Minimum Warranty Period: 15 years from date of Substantial Completion.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide accessories by the following:
  - 1. Toilet and Bath Accessories:
    - a. Bobrick Washroom Equipment, Inc.
- B. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, those indicated in the Toilet Accessory Schedule at the end of Part 3.

## 2.2 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, with No. 4 finish (satin), in 0.0312-inch (0.8-mm) minimum nominal thickness, unless otherwise indicated.
- B. Mirror Glass: ASTM C 1036, Type I, Class 1, Quality q2, nominal 6.0 mm thick, with silvering, electroplated copper coating, and protective organic coating complying with FS DD-M-411.
- C. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- D. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed.

## 2.3 FABRICATION

- A. General: Names or labels are not permitted on exposed faces of accessories. On interior surface not exposed to view or on back surface of each accessory, provide printed, waterproof label or stamped nameplate indicating manufacturer's name and product model number.
- B. Surface-Mounted Toilet Accessories: Unless otherwise indicated, fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with continuous stainless-steel hinge. Provide concealed anchorage where possible.
- C. Recessed Toilet Accessories: Unless otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors and access panels with full-length, stainless-steel hinge. Provide anchorage that is fully concealed when unit is closed.
- D. Framed Glass-Mirror Units: Fabricate frames for glass-mirror units to accommodate glass edge protection material. Provide mirror backing and support system that permits rigid, tamper-resistant glass installation and prevents moisture accumulation.
  - 1. Provide galvanized steel backing sheet, not less than 0.034 inch (0.85 mm) and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.
- E. Mirror-Unit Hangers: Provide mirror-unit mounting system that permits rigid, tamper- and theft-resistant installation, as follows:
  - 1. Heavy-duty wall brackets of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.
- F. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

## PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. Secure mirrors to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated.
- C. Install grab bars to withstand a downward load of at least 250 lbf (1112 N), when tested according to method in ASTM F 446.

## 3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective items.
- B. Remove temporary labels and protective coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

## 3.3 SCHEDULE OF ACCESSORIES

Product

A. Product Schedule: Products are listed by manufacturer's product number. Provide listed products. Coordinate models for toilet partition, or wall mounting. Handicapped stalls require fully recessed units to allow grab bar clearance. Where full recess mounting is not possible because of inadequate wall thickness, provide similar semi-recessed models.

MFR #

Toduct	WII IX II
Framed Mirror - Glass	Bobrick B-290 Series
Toilet Paper Dispenser	Bobrick B-2888
Paper Towel Dispenser/Waste	Bobrick B-3944
Soap Dispenser	Bobrick B-82216
Toilet Grab Bar - Two Wall Type	Bobrick B-5637.99
Sanitary Napkin Disposal	Bobrick Contura Series B-270
Mop Rack and Shelf	Bobrick B-224x30
Baby Changing Station	Bobrick KB 110-SSRE
	Framed Mirror - Glass Toilet Paper Dispenser Paper Towel Dispenser/Waste Soap Dispenser Toilet Grab Bar - Two Wall Type Sanitary Napkin Disposal Mop Rack and Shelf

- B. Room Schedule: Provide the following items. Provide one item per room unless otherwise indicated:
  - 1. Public toilet rooms, multi-fixture:
    - a. Toilet tissue dispenser (One per Water Closet)
    - b. Paper towel dispenser (One per toilet room)
    - c. Soap dispensers (One per Sink)
    - d. Sanitary Napkin Disposal (Women's Only; One per Water Closet)
    - e. Grab Bar Set (One per Accessible Water Closet)
    - f. Framed Mirror (As indicated)
  - 2. Public toilet rooms, single-fixture:
    - a. Toilet tissue dispenser
    - b. Paper towel dispenser
    - c. Soap dispensers
    - d. Grab Bar Set
    - e. Framed Mirror (As indicated)
  - 3. Custodial Closet:
    - a. Mop Rack and Shelf

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END OF SECTION