

SECTION 10 11 00 - VISUAL DISPLAY SURFACES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Markerboards.
 - 2. Tackboards.

1.3 DEFINITIONS

- A. Tackboard: Framed or unframed, tackable, visual display board assembly.
- B. Visual Display Board Assembly: Visual display surface that is factory fabricated into composite panel form, either with or without a perimeter frame; includes markerboards, and tackboards.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for visual display surfaces.
- B. Shop Drawings: For visual display surfaces. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Show locations of panel joints.
 - 2. Include sections of typical trim members.
- C. Samples for Initial Selection: For each type of visual display surface indicated, for units with factory-applied color finishes, and as follows:
 - 1. Actual sections of porcelain-enamel face sheet tackboard assembly .
 - 2. Fabric swatches of polyester-fabric-faced tack assemblies.
 - 3. Include accessory Samples to verify color selected.
- D. Samples for Verification: For each type of visual display surface indicated.

1. Visual Display Surface: Not less than 8-1/2 by 11 inches (215 by 280 mm), mounted on substrate indicated for final Work. Include one panel for each type, color, and texture required.
 2. Trim: 6-inch- (152-mm-) long sections of each trim profile.
 3. Display Rail: 6-inch- (152-mm-) long sections.
 4. Support System: 6-inch- (152-mm-) long sections.
 5. Accessories: Full-size Sample of each type of accessory.
- E. Product Schedule: For visual display surfaces. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for surface-burning characteristics of fabrics.
- C. Warranties: Sample of special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For visual display surfaces to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Source Limitations: Obtain visual display surfaces from single source from single manufacturer.
- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 1. Flame-Spread Index: 25 or less.
 2. Smoke-Developed Index: 450 or less.
- C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate appearance and aesthetic effects and set quality standards for installation.
 1. Build mockup of typical Visual Display Board Assembly as shown on Drawings. Include accessories.
 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver factory-built visual display surfaces, including factory-applied trim where indicated, completely assembled in one piece without joints, where possible. If dimensions exceed maximum manufactured panel size, provide two or more pieces of equal length as acceptable to Architect. When overall dimensions require delivery in separate units, prefit components at the factory, disassemble for delivery, and make final joints at the site.
- B. Store visual display surfaces vertically with packing materials between each unit.

1.9 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install visual display surfaces until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.10 WARRANTY

- A. Special Warranty for Porcelain-Enamel Face Sheets: Manufacturer's standard form in which manufacturer agrees to repair or replace porcelain-enamel face sheets that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Surfaces lose original writing and erasing qualities.
 - b. Surfaces exhibit crazing, cracking, or flaking.
 - 2. Warranty Period: Life of the building.
 - 3. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Porcelain-Enamel Face Sheet: Manufacturer's standard steel sheet with porcelain-enamel coating fused to steel; uncoated thickness indicated.
 - 1. Gloss Finish: Gloss as indicated; dry-erase markers wipe clean with dry cloth or standard eraser.
- B. Polyester Fabric: Nondirectional weave, 100 percent polyester; weighing not less than **15 oz./sq. yd. (508 g/sq. m)**; with surface-burning characteristics indicated.
- C. Hardboard: ANSI A135.4, tempered.

- D. Particleboard: ANSI A208.1, Grade M-1, that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. Fiberboard: ASTM C 208.
- F. Extruded Aluminum: [ASTM B 221 \(ASTM B 221M\)](#), Alloy 6063.
- G. Adhesives: Manufacturer's standard product that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 MARKERBOARD ASSEMBLIES

- A. Porcelain-Enamel Markerboards: Balanced, high-pressure, factory-laminated markerboard assembly of three-ply construction consisting of backing sheet, core material, and [0.021-inch- \(0.53-mm-\)](#) thick, porcelain-enamel face sheet with high-gloss finish.
 - 1. Basis of Design Product: Subject to compliance with requirements, provide LCS-II, Series 4, Type A, #92 white by Claridge Products & Equipment, Inc., www.claridgeproducts.com, or comparable product by one of the following:
 - a. [A-1 Visual Systems](#): Series 100; www.a-1markerboards.com.
 - b. [Best-Rite Manufacturing](#): Series 202A; www.moorecoinc.com.
 - c. Substitutions: See Section 01 25 00 - Substitution Procedures.

2.3 TACKBOARD ASSEMBLIES

- A. Basis of Design Product: Subject to compliance with requirements, provide Designer Fabric, Series 4, Type CO, Color to be selected from Manufacturer's standard colors, by Claridge Products & Equipment, Inc. Harrison, Arkansas 72602; www.claridgeproducts.com, or comparable product by one of the following:
 - 1. [A-1 Visual Systems](#): Series 100; www.a-1markerboards.com.
 - 2. [Best-Rite Manufacturing](#): Series 333A; www.moorecoinc.com.
 - 3. Substitutions: See Section 01 25 00 - Substitution Procedures.
- B. Polyester-Fabric-Faced Tackboard : [1/4-inch- \(6-mm-\)](#) thick, polyester-fabric-faced cork sheet factory laminated to [1/4-inch- \(6-mm-\)](#) thick hardboard backing.
- C. General: Manufacturer's standard, aluminum-framed, tackable cork visual display surface fabricated into narrow rail shape and designed for displaying material.

2.4 MARKERBOARD AND TACKBOARD ACCESSORIES

- A. Aluminum Frames and Trim: Fabricated from not less than 0.062-inch- (1.57-mm-) thick, extruded aluminum; slim size and standard shape .
 - 1. Field-Applied Trim: Manufacturer's standard, screw-on trim with Phillips flat-head screws.
- B. Chalktray: Manufacturer's standard, continuous.
 - 1. Solid Type: Extruded aluminum with ribbed section and smoothly curved exposed ends.
- C. Map Rail: Provide the following accessories:
 - 1. Display Rail: Continuous and integral with map rail; fabricated from cork approximately 1 to 2 inches (25 to 50 mm) wide.

2.5 FABRICATION

- A. Porcelain-Enamel Visual Display Assemblies: Laminate porcelain-enamel face sheet and backing sheet to core material under heat and pressure with manufacturer's standard flexible, waterproof adhesive.
- B. Visual Display Boards: Factory assemble visual display boards unless otherwise indicated.
 - 1. Where factory-applied trim is indicated, trim shall be assembled and attached to visual display boards at manufacturer's factory before shipment.
- C. Factory-Assembled Visual Display Units: Coordinate factory-assembled units with trim and accessories indicated. Join parts with a neat, precision fit.
 - 1. Where size of visual display boards or other conditions require support in addition to normal trim, provide structural supports or modify trim as indicated or as selected by Architect from manufacturer's standard structural support accessories to suit conditions indicated.
- D. Modular Visual Display Boards: Fabricated with integral panel clips attached to core material.
- E. Aluminum Frames and Trim: Fabricate units straight and of single lengths, keeping joints to a minimum. Miter corners to a neat, hairline closure.
 - 1. Where factory-applied trim is indicated, trim shall be assembled and attached to visual display units at manufacturer's factory before shipment.

2.6 GENERAL FINISH REQUIREMENTS

- 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. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.

2.8 VISUAL DISPLAY SURFACE SCHEDULE

- A. Visual Display Board **<Insert drawing designation>**: Factory assembled.
 - 1. Markerboard: Porcelain-enamel markerboard assembly.
 - a. Color: White .
 - 2. Corners: Square .
 - 3. Width: As indicated on Drawings .
 - 4. Height: As indicated on Drawings .
 - 5. Mounting: Wall .
 - 6. Mounting Height: As indicated on Drawings .
 - 7. Factory -Applied Aluminum Trim: Manufacturer's standard with clear anodic finish.
 - 8. Accessories:
 - a. Chalktray: Box type.
 - b. Map rail with display rail .
- B. Tackboard **<Insert drawing designation>**: Factory assembled.
 - 1. Tack Surface: Polyester-fabric-faced tackboard assembly **<Insert designation>**.
 - a. Color: Match Architect's sample .
 - 2. Corners: Square .
 - 3. Width: As indicated on Drawings .
 - 4. Height: As indicated on Drawings .
 - 5. Mounting: Wall .
 - 6. Mounting Height: As indicated on Drawings .
 - 7. Edges: Concealed by trim .
 - a. Factory -Applied Aluminum Trim: Manufacturer's standard style, with clear anodic finish.
- C. Visual Display Rail **<Insert drawing designation>**: Factory assembled.
 - 1. Tack Surface: Polyester-fabric-faced tackboard assembly **<Insert designation>**.

- a. Color: Match Architect's sample .
2. Size: 1 inch (25 mm) high by length indicated on Drawings.
3. Edges: Extruded-aluminum trim .
4. Ends: Not required.
5. Aluminum Finish: Clear anodic finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, surface conditions of wall, and other conditions affecting performance of the Work.
- B. Examine walls and partitions for proper preparation and backing for visual display surfaces.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions for surface preparation.
- B. Clean substrates of substances that could impair the performance of and affect the smooth, finished surfaces of visual display boards, including dirt, mold, and mildew.
- C. Prepare surfaces to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, defects, projections, depressions, and substances that will impair bond between visual display surfaces and wall surfaces.

3.3 INSTALLATION, GENERAL

- A. General: Install visual display surfaces in locations and at mounting heights indicated on Drawings. Keep perimeter lines straight, level, and plumb. Provide grounds, clips, backing materials, adhesives, brackets, anchors, trim, and accessories necessary for complete installation.

3.4 INSTALLATION OF FACTORY-FABRICATED VISUAL DISPLAY BOARDS AND ASSEMBLIES

- A. Visual Display Boards: Attach concealed clips, hangers, and grounds to wall surfaces and to visual display boards with fasteners at not more than 16 inches (400 mm) o.c. Secure both top and bottom of boards to walls.

1. Field-Applied Aluminum Trim: Attach trim over edges of visual display boards and conceal grounds and clips. Attach trim to boards with fasteners at not more than **24 inches (610 mm)** o.c.
 - a. Attach chalktrays to boards with fasteners at not more than **12 inches (300 mm)** o.c.

3.5 INSTALLATION OF VISUAL DISPLAY RAILS

- A. Display Rails: Install rails in locations and at mounting heights indicated on Drawings. Attach to wall surface with fasteners at not more than **16 inches (400 mm)** o.c.

3.6 INSTALLATION OF VISUAL DISPLAY WALL PANELS

3.7 INSTALLATION OF [RAIL] [MODULAR] SUPPORT SYSTEM

- A. Rail Support System: Install horizontal support rail in locations and at mounting heights indicated on Drawings, or if not indicated, at height indicated below. Attach to wall surface with fasteners at **12 inches (300 mm)** o.c.
 1. Mounting Height: [**72 inches (1829 mm)**] <Insert dimension> above finished floor to top of rail.
 2. Hang visual display units on rail support system.
- B. Modular Support System: Install adjustable standards in locations and at mounting heights indicated on Drawings, or if not indicated, at height indicated below. Install standards at **48 inches (1219 mm)** o.c., vertically aligned and plumb, and attached to wall surface with fasteners at **12 inches (300 mm)** o.c.
 1. Mounting Height: [**12 inches (300 mm)**] <Insert dimension> above finished floor to bottom of standard.
 2. Install single-slotted standard at each end of each run of standards and double-slotted standards at intermediate locations.
 3. Provide locking screw at top corner of visual display board at each standard.
 4. Hang visual display units on modular support system.

3.8 CLEANING AND PROTECTION

- A. Clean visual display surfaces according to manufacturer's written instructions. Attach one cleaning label to visual display surface in each room.
- B. Touch up factory-applied finishes to restore damaged or soiled areas.
- C. Cover and protect visual display surfaces after installation and cleaning.

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Insert Project Name

END OF SECTION 10 11 00

SECTION 10 14 23 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Panel signs.
- 2. Room-identification signs.
- 3. Field-applied, vinyl-character signs.

- B. Related Requirements:

- 1. Section 01 50 00 "Temporary Facilities and Controls" for temporary Project identification signs and for temporary information and directional signs.
- 2. Section 01 56 39 "Temporary Tree and Plant Protection" for temporary protection-zone signage.
- 3. [Section 14 21 00 "Electric Traction Elevators"] [Section 14 24 00 "Hydraulic Elevators"] or code-required conveying equipment signage.
- 4. Section 22 05 53 "Identification for Plumbing Piping and Equipment" for labels, tags, and nameplates for plumbing systems and equipment.
- 5. Section 23 05 53 "Identification for HVAC Piping and Equipment" for labels, tags, and nameplates for HVAC systems and equipment.
- 6. Section 26 05 53 "Identification for Electrical Systems" for labels, tags, and nameplates for electrical equipment.
- 7. Section 26 51 00 "Interior Lighting" for illuminated, self-luminous, and photoluminescent exit sign units.

1.3 ALLOWANCES

- A. Allowances for **[signage] [room-identification signs]** <Insert item description> are specified in Section 01 21 00 "Allowances."
- B. <Insert product or material> **[is] [are]** part of <Insert name of allowance>.

1.4 DEFINITIONS

- A. Accessible: In accordance with the accessibility standard.

- B. Illuminated: Illuminated by lighting source integrally constructed as part of the sign unit.

1.5 COORDINATION

- A. Furnish templates for placement of sign-anchorage devices embedded in permanent construction by other installers.
- B. Furnish templates for placement of electrical service embedded in permanent construction by other installers.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. LEED Submittals (Projects authorized for LEED certification only)
 - 1. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regionally manufactured materials. Include statement indicating cost for each regionally manufactured material.
 - a. Include statement indicating location of manufacturer and distance to Project for each regionally manufactured material.
 - 2. Product Data for Credit IEQ 4.1: For adhesives, documentation including printed statement of VOC content.
 - 3. Laboratory Test Reports for Credit IEQ 4.1: For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For panel signs.
 - 1. Include fabrication and installation details and attachments to other work.
 - 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 - 3. Show message list, typestyles, graphic elements[, **including raised characters and Braille**], and layout for each sign at least [**half size**] <Insert scale>.
 - 4. Show locations of electrical service connections.
 - 5. Include diagrams for power, signal, and control wiring.
- D. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
 - 1. Include representative Samples of available typestyles and graphic symbols.
- E. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:

1. Panel Signs: **[Full-size Sample] [Not less than 12 inches (300 mm) square, including corner] <Insert size>**.
 2. Room-Identification Signs: **[Full-size Sample] <Insert size>**.
 3. Field-Applied, Vinyl-Character Signs: **[Full-size Sample of characters on glass] <Insert requirement>**.
 4. Variable Component Materials: **[Full-size Sample] [8-inch (200-mm) Sample] <Insert size>** of each base material, character (letter, number, and graphic element) in each exposed color and finish not included in Samples above.
 5. Exposed Accessories: **[Full-size Sample] [Half-size Sample] <Insert size>** of each accessory type.
- F. Sign Schedule: Use same designations specified or indicated on Drawings or in a sign schedule.
- G. Delegated-Design Submittal: For **[signs indicated in "Performance Requirements" Article] <Insert sign designations>**.
1. Include structural analysis calculations for signs indicated to comply with design loads; signed and sealed by the qualified professional engineer responsible for their preparation.
- 1.7 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For **[Installer] [and] [manufacturer]**.
 - B. Sample Warranty: For special warranty.
- 1.8 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For signs to include in maintenance manuals.
- 1.9 QUALITY ASSURANCE
- A. Installer Qualifications: **[Manufacturer of products] [An entity that employs installers and supervisors who are trained and approved by manufacturer]**.
- 1.10 FIELD CONDITIONS
- A. Field Measurements: Verify locations of **[anchorage devices] [and] [electrical service]** embedded in permanent construction by other installers by field measurements before fabrication, and indicate measurements on Shop Drawings.
- 1.11 WARRANTY
- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Deterioration of finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image.
 - c. Separation or delamination of sheet materials and components.
2. Warranty Period: [**Five**] <Insert number> years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in Texas Accessibility Standards (TAS) for signs.

2.2 SIGNS

- A. **Basis-of-Design Product:** Subject to compliance with requirements, provide plaque made of New Hermes Gravo-Tac material with raised numbers and Grade 2 Braille provided by New Hermes, Inc.; www.newhermes.com or comparable product by one of the following:

1. Accent Signage Systems, Inc.; www.accentssignage.com.
2. **ASI Sign Systems, Inc.**, InTac System; www.asisignage.com.
3. Signs of Success; www.signsuccess.com
4. Substitutions: See Section 01 25 00 - Substitution Procedures.

- B. Room-Identification Sign <Insert drawing designation>: Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:

1. **Basis-of-Design Product:** Subject to compliance with requirements, provide 1/16" thick plaque made of New Hermes Gravo-Tac material with 1/32" thick 3/4" tall white raised numbers and Grade 2 Braille provided by New Hermes, Inc.; www.newhermes.com or comparable product by one of the following:.
2. Laminated-Sheet Sign: New Hermes Gravo-Tac material face sheet with raised graphics laminated to backing sheet to produce composite sheet.
 - a. Composite-Sheet Thickness: 3/32".
 - b. Surface-Applied Graphics: Applied Gravo-Tac .
 - c. Color(s): Back Plate: Taupe #216-214. Raised Letters: Bright White #214-114. Braille to match back plate.
3. Sign Perimeter: Finish edges smooth.
 - a. Edge Condition: Square cut .
 - b. Corner Condition in Elevation: Square .

4. Mounting: Manufacturer's standard method for substrates indicated with .
1. Text and Typeface for Room Identification: Accessible raised characters and Braille. Century Gothic Bold, 3/4" tall, Bright White. Braille to match background color.
2. Text and Typeface for Department and Suite Identification: Accessible raised characters Century Gothic Bold, 5/8" tall, Bright White. No Braille.

2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signage, noncorrosive and compatible with each material joined, and complying with the following:
 1. Use concealed fasteners and anchors unless indicated to be exposed.
- B. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch (1.14 mm) thick, with adhesive on both sides.
- C. Hook-and-Loop Tape: Manufacturer's standard two-part tape consisting of hooked part on sign back and looped side on mounting surface.
- D. Magnetic Tape: Manufacturer's standard magnetic tape with adhesive on one side.

2.4 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the 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 signage work.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Verify that anchor inserts are correctly sized and located to accommodate signs.
- D. Verify that electrical service is correctly sized and located to accommodate signs.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
 3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
 4. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Room-Identification Signs[**and Other Accessible Signage**]: Install in locations on walls [**as indicated**] [**and**] [**according to accessibility standard**] <Insert requirement>.
- C. Mounting Methods:
1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
 - b. Thin or Hollow Surfaces: Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
 2. Projecting Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place spacers on studs, place sign in position, and push until spacers are pinched between sign and substrate, embedding the stud ends in holes. Temporarily support sign in position until adhesive fully sets.
 - b. Thin or Hollow Surfaces: Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.
 3. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
 4. Brackets: Remove loose debris from substrate surface and install backbar or bracket supports in position so that signage is correctly located and aligned.
 5. Adhesive: Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive

away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.

6. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.
7. Hook-and-Loop Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply sign component of two-part tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage; push to engage tape adhesive. Keep tape strips [0.250 inch (6.35 mm)] <Insert dimension> away from edges to prevent visibility at sign edges when sign is initially installed or reinstalled. Apply substrate component of tape to substrate in locations aligning with tape on back of sign; push and rub well to fully engage tape adhesive to substrate.
8. Magnetic Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position.
9. Shim-Plate Mounting: Provide 1/8-inch- (3-mm-) thick, concealed aluminum shim plates with predrilled and countersunk holes, at locations indicated, and where other direct mounting methods are impractical. Attach plate with fasteners and anchors suitable for secure attachment to substrate. Attach signs to plate using <Insert mounting method> method specified above.

- D. Field-Applied, Vinyl-Character Signs: Clean and dry substrate. Align sign characters in final position before removing release liner. Remove release liner in stages, and apply and firmly press characters into final position. Press from the middle outward to obtain good bond without blisters or fishmouths. Remove carrier film without disturbing applied vinyl film.
- E. Signs Mounted on Glass: Provide opaque sheet matching sign material and finish onto opposite side of glass to conceal back of sign.

3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 10 14 23

SECTION 10 21 13 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Stainless-steel toilet compartments configured as **[toilet enclosures] [entrance screens] [and] [urinal screens]**.
 - 2. Phenolic-core toilet compartments configured as **[toilet enclosures] [entrance screens] [and] [urinal screens]**.
- B. Related Sections:
 - 1. Section 05 50 00 "Metal Fabrications" for supports that attach **[ceiling-hung compartments] [floor-and-ceiling-anchored compartments] [and] [post-to-ceiling screens]** to overhead structural system.
 - 2. **[Section 06 10 00 "Rough Carpentry"] [Section 06 10 35 "Miscellaneous Rough Carpentry"]** for **[blocking] [overhead support of floor-and-ceiling-anchored compartments] [and] [overhead support of post-to-ceiling screens]**.
 - 3. Section 10 28 00 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. LEED Submittals (Projects authorized for LEED certification only)
 - 1. Product Data for Credit IEQ 4.4: For particleboard, documentation indicating that product contains no urea formaldehyde.
 - 2. Laboratory Test Reports for Credit IEQ 4: For **[adhesives] [and] [composite wood products]**, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For toilet compartments. 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.
3. Show locations of centerlines of toilet fixtures.
4. Show[**ceiling grid and**] overhead support or bracing locations.

D. Samples for Initial Selection: For each type of unit indicated. Include Samples of hardware and accessories involving material and color selection.

E. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

1. Each type of material, color, and finish required for units, prepared on **6-inch- (152-mm-**) square Samples of same thickness and material indicated for Work.
2. Each type of hardware and accessory.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment, from manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.6 QUALITY ASSURANCE

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

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: **[25] [75] [200]** or less.
2. Smoke-Developed Index: 450 or less.

C. Regulatory Requirements: Comply with applicable provisions in **[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"] [and] [ICC/ANSI A117.1]** for toilet compartments designated as accessible.

1.7 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: **ASTM B 221** (ASTM B 221M).
- C. Brass Castings: ASTM B 584.
- D. Brass Extrusions: ASTM B 455.
- E. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- F. Stainless-Steel Castings: ASTM A 743/A 743M.
- G. Zamac: ASTM B 86, commercial zinc-alloy die castings.
- H. Adhesives: Manufacturer's standard product that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 STAINLESS-STEEL UNITS <Insert drawing designation>

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
- B. Basis-of-Design Product: Subject to compliance with requirements, provide General Partitions; 40 Series; General Partitions Mfg. Corp.; www.generalpartitions.com or comparable product by one of the following:
 - 1. Bradley Corporation; Mills Partitions; Series 400 Sentinel; www.bradleycorp.com.
 - 2. Global Steel Products Corp; www.globalpartitions.com.
 - 3. Substitutions: See Section 01 25 00 - Substitution Procedures.
- C. Toilet-Enclosure Style: Floor anchored/Overhead braced .
- D. Urinal-Screen Style: Floor anchored/Overhead braced .
- E. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.
 - 1. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of **1 inch (25 mm)** for doors and panels and **1-1/4 inches (32 mm)** 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.
- F. Urinal-Screen Construction:
1. Flat-Panel Urinal Screen: Matching panel construction.
- G. Facing Sheets and Closures: Stainless-steel sheet of nominal thicknesses as follows:
1. Pilasters, Braced at Both Ends: Manufacturer's standard thickness, but not less than **0.038 inch (0.95 mm)**.
 2. Panels: Manufacturer's standard thickness, but not less than **0.031 inch (0.79 mm) [0.038 inch (0.95 mm)]**.
 3. Doors: Manufacturer's standard thickness, but not less than **0.031 inch (0.79 mm)**.
 4. Flat-Panel Urinal Screens: Thickness matching the panels.
- H. Pilaster Shoes : Stainless-steel sheet, not less than **0.031-inch (0.79-mm)** nominal thickness and **3 inches (76 mm)** high, finished to match hardware.
- I. Urinal-Screen Post: Manufacturer's standard post design of material matching the thickness and construction of pilasters ; with shoe matching that on the pilaster.
- J. Brackets (Fittings):
1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel .
- K. Stainless-Steel Finish: Manufacturer's standard textured finish Leather on exposed faces. Protect exposed surfaces from damage by application of strippable, temporary protective covering before shipment.

2.3 PHENOLIC-CORE UNITS <Insert drawing designation>

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide General Partitions; 40 Series; General Partitions Mfg. Corp.; www.generalpartitions.com or comparable product by one of the following:
1. [Bobrick Washroom Equipment, Inc](http://www.bobrick.com); 1082.67; www.bobrick.com.
 2. [Global Steel Products Corp](http://www.globalpartitions.com); www.globalpartitions.com.
 3. Substitutions: See Section 01 25 00 - Substitution Procedures.
- C. Toilet-Enclosure Style: **Floor anchored**/Overhead braced .
- D. Urinal-Screen Style: **Floor anchored**/ Overhead braced] .

- E. Door, Panel, and Pilaster Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide minimum **3/4-inch- (19-mm-)** thick doors and pilasters and minimum **1/2-inch- (13-mm-)** thick panels.
- F. Pilaster Shoes : Fabricated from stainless-steel sheet, not less than **0.031-inch (0.79-mm)** nominal thickness and **3 inches (76 mm)** high, finished to match hardware.
- G. Urinal-Screen Post: Manufacturer's standard post design of material matching the thickness and construction of pilasters ; with shoe matching that on the pilaster.
- H. Brackets (Fittings):
 - 1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel .
- I. Phenolic-Panel Finish:
 - 1. Facing Sheet Finish: [**One color and pattern**] [**Two colors and patterns**] in each room.
 - 2. Color and Pattern: As selected by Architect from manufacturer's full range color to be determined, with manufacturer's standard dark color core .

2.4 ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
 - 1. Material: Stainless steel .
 - 2. Hinges: Manufacturer's standard continuous, cam type that swings to a closed or partially open position .
 - 3. 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 regulatory requirements for accessibility at compartments designated as accessible.
 - 4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
 - 5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
 - 6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.
- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel fasteners.

2.5 FABRICATION

- A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- B. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at bottoms of posts. Provide shoes at posts to conceal anchorage.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

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 (13 mm).
 - b. Panels and Walls: 1 inch (25 mm).
- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches (44 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.2 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware 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 doors[**and doors in entrance screens**] to return doors to fully closed position.

END OF SECTION 10 21 13

SECTION 10 21 16 - SHOWER AND DRESSING COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Shower compartments fabricated from **[CMU block with cultured marble, granite, or other solid surface panel (preferred)] [stainless steel] [solid phenolic]**
2. Dressing compartments **fabricated from [stainless steel] [solid phenolic]**

B. Related Sections:

1. Section 05 50 00 "Metal Fabrications" for supports that attach floor-and-ceiling-anchored compartments to overhead structural system.
2. **[Section 06 10 00 "Rough Carpentry"] [Section 06 10 53 "Miscellaneous Rough Carpentry"]** for **[blocking] [and] [overhead support of floor-and-ceiling-anchored compartments]**.
3. Section 10 28 00 "Toilet, Bath, and Laundry Accessories" for grab bars, purse shelves, and similar accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. LEED Submittals (Projects authorized for LEED certification only)
1. Product Data for Credit IEQ 4.4: For particleboard, documentation indicating that product contains no urea formaldehyde.
 2. Laboratory Test Reports for Credit IEQ 4: For **[adhesives] [and] [composite wood products]**, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For shower and dressing compartments. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of cutouts for compartment-mounted accessories.
2. Show locations of reinforcements for compartment-mounted grab bars.
3. Show locations of centerlines of drains.
4. Show[**ceiling grid and**] overhead support or bracing locations.

D. Samples for Initial Selection: For each type of compartment indicated. Include Samples of hardware and accessories for material and color selection.

E. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

1. Each type of material, color, and finish required for compartments, prepared on **6-inch- (152-mm-)** square Samples of same thickness and material indicated for the Work.
2. Each type of hardware and accessory.
3. Curtain Fabric: **12-inch- (305-mm-)** square swatch or larger as required to show complete pattern repeat, from dye lot used for the Work, with specified treatments applied. Mark top and face of material.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of shower and dressing compartment, from manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For shower and dressing compartments to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: **[25] [75] [200]** or less.
2. Smoke-Developed Index: 450 or less.

B. Regulatory Requirements: Comply with applicable provisions in [**the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines**] [**and**] [**ICC/ANSI A117.1**] for shower and dressing compartments designated as accessible.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls, columns, ceilings, and other construction contiguous with shower and dressing compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: **ASTM B 221 (ASTM B 221M)**.
- C. Brass Castings: ASTM B 584.
- D. Brass Extrusions: ASTM B 455.
- E. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- F. Stainless-Steel Castings: ASTM A 743/A 743M.
- G. Adhesives: Manufacturer's standard product that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 CMU BLOCK WITH CULTURED MARBLE, GRANITE, OR OTHER SOLID SURFACE PANEL COMPARTMENTS <Insert drawing designation> **[In Development: suggested components for shower compartments; use with fiber cement board ceiling. Pre-molded shower units may be used within restrooms only]**

2.3 STAINLESS-STEEL COMPARTMENTS <Insert drawing designation>

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide **partitions by** General Partitions Mfg. Corp.; www.generalpartitions.com or comparable product by one of the following:
 - 1. **Global Steel Products Corp;** www.globalpartitions.com.
 - 2. Substitutions: See Section 01 25 00 - Substitution Procedures.
- C. Configuration: As shown on Drawings.
- D. Enclosure Style: Overhead braced
- E. Panel and Pilaster Construction: Seamless metal facing sheets, pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures and with corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.

1. Core Material: Manufacturer's standard, sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of **1 inch (25 mm)** for panels and **1-1/4 inches (32 mm)** for pilasters.
 2. Grab-Bar Reinforcement: Provide concealed internal reinforcement for grab bars mounted on compartments.
 3. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to compartments.
- F. Door Construction: Match panels; **1-inch (25-mm)** finished thickness.
- G. Facing Sheets and Closures: Stainless-steel sheet of nominal thicknesses as follows:
1. Panels: Manufacturer's standard thickness, but not less than **0.031 inch (0.79 mm) [0.038 inch (0.95 mm)]**.
 2. Doors: Manufacturer's standard thickness, but not less than **0.031 inch (0.79 mm)**.
- H. Pilaster Shoes: Formed from stainless-steel sheet, not less than **0.031-inch (0.79-mm)** nominal thickness and **3 inches (76 mm)** high, finished to match hardware.
- I. Brackets (Fittings):
1. Dressing-Compartment Brackets: Match toilet-compartment brackets specified in Section 10 21 13 "Toilet Compartments."
- J. Stainless-Steel Finish: Match stainless-steel toilet-compartment finish, specified in Section 10 21 13 "Toilet Compartments," on exposed faces. Protect exposed surfaces from damage by applying strippable, temporary protective covering before shipment.

2.4 PHENOLIC-CORE COMPARTMENTS <Insert drawing designation>

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide **partitions by** General Partitions Mfg. Corp.; www.generalpartitions.com or comparable product by one of the following:
1. **Global Steel Products Corp;** www.globalpartitions.com.
 2. Substitutions: See Section 01 25 00 - Substitution Procedures.
- C. Configuration: As shown on Drawings.
- D. Enclosure Style: Overhead braced.
- E. Panel and Pilaster Construction: Solid phenolic material consisting of solid phenolic-core panel with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated) and with eased and polished edges. Provide minimum **3/4-inch- (19-mm-)** thick pilasters and minimum **1/2-inch- (13-mm-)** thick panels.
- F. Door Construction: Match panels; **3/4-inch (19-mm)** minimum thickness.

- G. Pilaster Shoes: Formed from stainless-steel sheet, not less than **0.031-inch (0.79-mm)** nominal thickness and **3 inches (76 mm)** high, finished to match hardware.
- H. Brackets (Fittings):
 - 1. Dressing-Compartment Brackets: Match toilet-compartment brackets specified in Section 10 21 13 "Toilet Compartments."
- I. Phenolic-Core-Panel Finish:
 - 1. Facing Sheet Finish: [**One color and pattern**] [**Two colors and patterns**] in each room.
 - 2. Color and Pattern: Match phenolic-core toilet compartments specified in Section 10 21 13 "Toilet Compartments" with manufacturer's standard dark-color core .

2.5 ACCESSORIES

- A. Door Hardware and Accessories: Manufacturer's standard design, heavy-duty, operating hardware and accessories.
 - 1. Material: Stainless steel.
 - 2. Hinges: Manufacturer's standard, continuous, cam type that swings to a closed or partially open position .
 - 3. 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 regulatory requirements for accessibility at compartments designated as accessible.
 - 4. Clothing Hooks: Manufacturer's standard clothing hooks in each dressing compartment; include one combination hook and rubber-tipped bumper at in-swinging doors, sized to prevent door from hitting wall panel or compartment-mounted accessories.
 - 5. Door Bumper: Manufacturer's standard, rubber-tipped bumper at out-swinging doors.
 - 6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.
- B. Overhead Bracing: Manufacturer's standard, continuous, extruded-aluminum head rail or cap with antigrip profile; in manufacturer's standard finish.
- C. Head Rail with Hooks: Manufacturer's standard, continuous, extruded-aluminum head rail or cap with curtain hooks running in concealed track; with antigrip profile; in manufacturer's standard finish.
- D. Curtain: Flame-resistant, [**polyester-reinforced vinyl fabric**] [**manufacturer's standard fabric**] <Insert fabric> that is stain resistant, self-sanitizing, antistatic, and antimicrobial; launderable to a temperature of not less than [**90 deg F (32 deg C)**] <Insert temperature>.
 - 1. Flame Resistance: Passes NFPA 701 tests when tested by a testing and inspecting agency acceptable to authorities having jurisdiction.

2. Labeling: Identify fabrics with appropriate markings of applicable testing and inspecting agency.
 3. Curtain Grommets: Two-piece, rolled-edge, rustproof, nickel-plated brass; spaced not more than **6 inches (152 mm)** o.c.; machined into top hem.
 4. Length: Where curtain extends to a floor surface, size so that bottom hem clears finished floor by not more than **1 inch (25 mm)** and not less than **1/2 inch (13 mm)** above floor surface. Where curtains extend to a shower-receptor curb, size so that bottom hem hangs above curb line and clears curb line by not more than **1/2 inch (13 mm)**.
 5. Color and Pattern: Match Architect's sample .
- E. Soap Holder: [**Surface-mounted**] [**Recessed**], seamless [**stainless-steel**] <Insert material> soap dish.
- F. Seats: Manufacturer's standard, [**panel-mounted**] [**wall-mounted**] [**or**] [**floor-mounted**] benches.
1. Material: [**Wood**] [**Solid phenolic**] [**Molded plastic**] [**Stainless steel**] <Insert material>.
 2. Operation: [**Fixed**] [**Folding**].
 3. Finish: [**As indicated by manufacturer's designations**] [**Match Architect's sample**] [**As selected by Architect from manufacturer's full range**] [**Match enclosure panels**] <Insert finish>.
- G. Anchorages and Fasteners: Manufacturer's standard, exposed fasteners of stainless steel, chrome-plated steel, or solid brass, finished to match the items they are securing; with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

2.6 FABRICATION

- A. Overhead-Braced Compartments: Provide manufacturer's standard, corrosion-resistant supports, leveling method, and anchors at pilasters and walls to suit floor and wall conditions. Provide shoes at pilasters to conceal supports and leveling method.
- B. Door Sizes and Swings: Unless otherwise indicated, provide **24-inch- (610-mm-)** wide, in-swinging doors for standard shower and dressing compartments, and **36-inch- (914-mm-)** wide, out-swinging doors with a minimum **32-inch- (813-mm-)** wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install compartments rigid, straight, level, and plumb. Secure compartments in position with manufacturer's recommended anchoring devices.
1. Maximum Clearances for Dressing Compartment:
 - a. Pilasters and Panels: **1/2 inch (13 mm)**.
 - b. Panels and Walls: **1 inch (25 mm)**.
 2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than **[two brackets attached] [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. Overhead-Braced Compartments: Secure pilasters to floor, and level, plumb, and tighten. Set pilasters with anchors penetrating not less than **1-3/4 inches (44 mm)** into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. **[Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.]**
- C. Floor-and-Ceiling-Anchored Compartments: Secure pilasters to supporting construction, and level, plumb, and tighten. **[Hang doors and adjust so doors are level and aligned with panels when doors are in closed position.]**
- D. Curtains: Install curtains to specified length and verify that they hang vertically without stress points or diagonal folds.
- E. Shower Receptors: Install prefabricated shower receptors with drain gasket compression fit to outside diameter of waste pipe.

3.2 ADJUSTING

- A. Curtain Adjustment: After hanging curtains, test and adjust each track or rod to produce unencumbered, smooth operation. Steam and dress down curtains as required to produce crease- and wrinkle-free installation. Remove and replace curtains that are stained or soiled or that have stress points or diagonal folds.
- B. Hardware Adjustment: Adjust and lubricate hardware according to hardware 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 doors to return doors to fully closed position.

END OF SECTION 10 21 16

SECTION 10 26 00 - WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Wall guards.
2. Corner guards.
3. Impact-resistant wall coverings.
4. Door protection systems.

- B. Related Sections:

1. Section 05 50 00 "Metal Fabrications" for [metal angle corner guards] [pipe guards] [wheel guards].
2. Section 08 71 00 "Door Hardware" for metal armor, kick, mop, and push plates.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide handrails capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 1. Uniform load of 50 lbf/ft. (0.73 kN/m) applied in any direction.
 2. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
 3. Uniform and concentrated loads need not be assumed to act concurrently.

1.4 ACTION SUBMITTALS

- A. Product Data: Include construction details, material descriptions, impact strength[, fire-test-response characteristics], dimensions of individual components and profiles, and finishes for each impact-resistant wall protection unit.
- B. LEED Submittals (Projects authorized for LEED certification only)
 1. Certificates for [Credit MR 6] [Credit MR 7]: Chain-of-custody certificates certifying that wood rails comply with forest certification requirements. Include evidence that

- manufacturer is certified for chain of custody by an FSC-accredited certification body. Include statement indicating cost for each certified wood product.
2. Product Data for Credit IEQ 4.1: For adhesives, documentation including printed statement of VOC content.
 3. Product Data for Credit IEQ 4.4: For particleboard, documentation indicating that products contain no urea formaldehyde.
 4. Laboratory Test Reports for Credit IEQ 4: For **[adhesives] [and] [composite wood products]**, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For each impact-resistant wall protection unit showing locations and extent. Include sections, details, and attachments to other work.
1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Samples for Initial Selection: For each type of impact-resistant wall protection unit indicated.
1. Include similar Samples of accent strips and accessories involving color selection.
- E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below. **[Include Samples of accent strips to verify color selected.]**
1. **[Wall] [and] [Corner] Guards: 12 inches (300 mm) long.** Include examples of joinery, corners, **[end caps,] [top caps,]** and field splices.
 2. Handrails: **12 inches (300 mm) long.** Include examples of joinery, corners, and field splices.
 3. Impact-Resistant Wall Covering: **6 by 6 inches (150 by 150 mm) square.**
 4. Door-Surface Protection: **6 by 6 inches (150 by 150 mm) square.**
 5. Door**[-Edge] [and] [-Frame] Protectors: 12 inches (300 mm) long.**
 6. Door-Knob and -Lever Protectors: Full-size unit of each type.
- 1.5 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For qualified **[Installer] [testing agency]**.
 - B. Material Certificates: For each impact-resistant plastic material, from manufacturer.
 - C. Material Test Reports: For each impact-resistant plastic material.
 - D. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each impact-resistant wall protection unit to include in maintenance manuals.
 - 1. Include recommended methods and frequency of maintenance for maintaining optimum condition of plastic covers under anticipated traffic and use conditions. Include precautions against using cleaning materials and methods that may be detrimental to plastic finishes and performance.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. **[Wall-Guard] [and] [Handrail] Covers:** Full-size plastic covers of maximum length equal to **[2] <Insert number>** percent of each type, color, and texture of units installed, but no fewer than **[two, 8-foot- (2.4-m-)] <Insert number and size>** long units.
 - 2. **Corner-Guard Covers:** Full-size plastic covers of maximum length equal to **[2] <Insert number>** percent of each type, color, and texture of units installed, but no fewer than **[two, 4-foot- (1.2-m-)] <Insert number and size>** long units.
- B. Include mounting and accessory components. Replacement materials shall be from same production run as installed units.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain impact-resistant wall protection units from single source from single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of impact-resistant wall protection units and are based on the specific system indicated. Refer to Section 01 40 00 "Quality Requirements."
- D. Revise subparagraph below to suit Project.
 - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- E. Surface-Burning Characteristics: Provide impact-resistant, plastic wall protection units with surface-burning characteristics as determined by testing identical products per ASTM E 84, NFPA 255, or UL 723 by UL or another qualified testing agency.

- F. Regulatory Requirements: Comply with applicable provisions in [the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines] [and] [ICC/ANSI A117.1].
- G. Preinstallation Conference: Conduct conference at [Project site] <Insert location>.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store impact-resistant wall protection units in original undamaged packages and containers inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
 - 1. Maintain room temperature within storage area at not less than 70 deg F (21 deg C) during the period plastic materials are stored.
 - 2. Keep plastic sheet material out of direct sunlight.
 - 3. Store plastic wall protection components for a minimum of 72 hours, or until plastic material attains a minimum room temperature of 70 deg F (21 deg C).
 - a. Store corner-guard covers in a vertical position.
 - b. Store [wall-guard] [bed-locator] [and] [handrail] covers in a horizontal position.

1.10 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install impact-resistant wall protection units until building is enclosed and weatherproof, wet work is complete and dry, and HVAC system is operating and maintaining temperature at 70 deg F (21 deg C) for not less than 72 hours before beginning installation and for the remainder of the construction period.

1.11 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of impact-resistant wall protection units that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Deterioration of plastic and other materials beyond normal use.
 - 2. Warranty Period: [Five] <Insert number> years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. PVC Plastic: ASTM D 1784, Class 1, textured, chemical- and stain-resistant, high-impact-resistant PVC or acrylic-modified vinyl plastic with integral color throughout; extruded and sheet material, thickness as indicated.
1. Impact Resistance: Minimum **25.4 ft-lbf/in. (1356 J/m)** of notch when tested according to ASTM D 256, Test Method A.
 2. Self-extinguishing when tested according to ASTM D 635.
 3. Flame-Spread Index: 25 or less.
 4. Smoke-Developed Index: 450 or less.
- B. Polycarbonate Plastic Sheet: ASTM D 6098, S-PC01, Class 1 or 2, abrasion resistant; with a minimum impact-resistance rating of **15 ft-lbf/in. (800 J/m)** of notch when tested according to ASTM D 256, Test Method A.
- C. Aluminum Extrusions: Alloy and temper recommended by manufacturer for type of use and finish indicated, but with not less than strength and durability properties specified in **ASTM B 221 (ASTM B 221M)** for Alloy 6063-T5.
- D. Stainless-Steel Sheet: ASTM A 240/A 240M.
- E. Brass: ASTM B 249/B 249M for extruded shapes and ASTM B 36/B 36 M for sheet.
- F. Solid Wood: Clear hardwood lumber of species indicated, free of appearance defects, and selected for compatible grain and color.
- G. Particleboard: Not allowed.
- H. Adhesive: As recommended by impact-resistant plastic wall protection manufacturer.

2.2 WALL GUARDS

- A. Crash Rail : Heavy-duty assembly consisting of continuous snap-on plastic cover installed over concealed retainer system; designed to withstand impacts.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 2. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following:
 - a. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - b. Korogard Wall Protection Systems; a division of RJF International Corporation.
 - c. Substitutions: See Section 01 25 00 – Substitution Procedures.
 3. Cover: Extruded rigid plastic, minimum **0.100-inch (2.5-mm)** wall thickness; as follows:

- a. Profile: Flat .
 - 1) Dimensions: Nominal 6 inches high by 1 inch deep (150 mm high by 25 mm deep) .
 - 2) Surface: Uniform .
 - b. Color and Texture: As selected by Architect from manufacturer's full range .
4. Continuous Retainer: Minimum 0.080-inch- (2.0-mm-) thick, one-piece, extruded aluminum.
 5. Retainer Clips: Manufacturer's standard impact-absorbing clips designed for heavy-duty performance.
 6. Bumper: Continuous rubber or vinyl bumper cushion(s).
 7. End Caps and Corners: Prefabricated, injection-molded plastic; matching color cover; field adjustable for close alignment with snap-on cover.
 8. Accessories: Concealed splices and mounting hardware.
 9. Mounting: Surface mounted directly to wall .

2.3 CORNER GUARDS

- A. Flush-Mounted, Resilient, Plastic Corner Guards : Assembly consisting of snap-on plastic cover that is flush with adjacent wall surface, installed over continuous retainer; including mounting hardware; fabricated with 90- or 135-degree turn to match wall condition; full wall height.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 2. Basis-of-Design Product: Subject to compliance with requirements, or comparable product by one of the following:
 - a. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - b. Korogard Wall Protection Systems; a division of RJF International Corporation.
 - c. Substitutions: See Section 01 25 00 – Substitution Procedures.
 3. Cover: Extruded rigid plastic, minimum 0.078-inch (2.0-mm) wall thickness; as follows:
 - a. Profile: Nominal 3-inch- (75-mm-) long leg and 1/4-inch (6-mm) corner radius .
 - b. Height: 8 feet (2.4 m) .
 - c. Color and Texture: As selected by Architect from manufacturer's full range .
 4. Retainer: Minimum 0.060-inch- (1.5-mm-) thick, one-piece, extruded aluminum.
 5. Retainer Clips: Manufacturer's standard impact-absorbing clips.

2.4 DOOR PROTECTION SYSTEMS

- A. General: Comply with BHMA A156.6.
 1. For fire-rated doors, provide door protection systems that are UL listed and labeled.

- B. Protection Plates: Fabricated from extruded rigid plastic, of thickness indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 - 2. Basis-of-Design Product: Subject to compliance with requirements, or comparable product by one of the following:
 - a. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - b. Korogard Wall Protection Systems; a division of RJF International Corporation.
 - c. Substitutions: See Section 01 25 00 – Substitution Procedures.

- C. Door-Edge Protection : Fabricated from extruded rigid plastic, minimum **0.040-inch (1.0-mm)** wall thickness; formed to fit over door edge without mortising.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 - 2. Basis-of-Design Product: Subject to compliance with requirements, or comparable product by one of the following:
 - a. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - b. Korogard Wall Protection Systems; a division of RJF International Corporation.
 - c. Substitutions: See Section 01 25 00 – Substitution Procedures.

 - 3. Shape: L .
 - 4. Color and Texture: As selected by Architect from manufacturer's full range .
 - 5. Mounting: Countersunk screws through factory-drilled mounting holes .

2.5 FABRICATION

- A. Fabricate impact-resistant wall protection units to comply with requirements indicated for design, dimensions, and member sizes, including thicknesses of components.

- B. Preform curved semirigid, impact-resistant sheet wall covering in factory for radius and sheet thickness as follows:
 - 1. Sheet Thickness of **0.040 Inch (1.0 mm)**: **24-inch (610-mm)** radius.

- C. Assemble components in factory to greatest extent possible to minimize field assembly. Disassemble only as necessary for shipping and handling.

- D. Fabricate components with tight seams and joints with exposed edges rolled. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.

- E. Miter corners and ends of wood handrails for returns.

2.6 METAL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Remove tool and die marks and stretch lines, or blend into finish.
 - 2. Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - 3. Run grain of directional finishes with long dimension of each piece.
 - 4. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- B. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances[, **fire rating**,] and other conditions affecting performance of work.
- B. Examine walls to which impact-resistant wall protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
 - 1. For impact-resistant wall protection units attached with adhesive or foam tape, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Complete finishing operations, including painting, before installing impact-resistant wall protection system components.
- B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

- A. General: Install impact-resistant wall protection units level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
 - 1. Install impact-resistant wall protection units in locations and at mounting heights indicated on Drawings or, if not indicated, at heights indicated below:

- a. Crash Rails: <Insert dimension> above finished floor.
 - b. Bumper Rails: <Insert dimension> above finished floor.
 - c. Rub Rails: <Insert dimension> above finished floor.
 - d. Chair Rails: <Insert dimension> above finished floor.
 - e. Handrails: <Insert dimension> above finished floor.
 - f. Bed Locators: <Insert dimension> above finished floor.
 - g. <Insert product and location>.
2. Provide splices, mounting hardware, anchors, and other accessories required for a complete installation.
 - a. Provide anchoring devices to withstand imposed loads.
 - b. Where splices occur in horizontal runs of more than **20 feet (6.1 m)**, splice aluminum retainers and plastic covers at different locations along the run, but no closer than **12 inches (305 mm)**.
 - c. Adjust **[end] [and] [top]** caps as required to ensure tight seams.
 - B. Impact-Resistant Wall Covering: Install top and edge moldings, corners, and divider bars as required for a complete installation.

3.4 CLEANING

- A. Immediately after completion of installation, clean plastic covers and accessories using a standard, ammonia-based, household cleaning agent.
- B. Remove excess adhesive using methods and materials recommended in writing by manufacturer.

END OF SECTION 10 26 00

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

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Public-use washroom accessories.
 - 2. Public-use shower room accessories.
 - 3. Private-use bathroom accessories.
 - 4. Warm-air dryers.
 - 5. Childcare accessories.
 - 6. Underlavatory guards.
 - 7. Custodial accessories.
- B. Owner-Furnished Material: <Insert product>.
- C. Related Sections:
 - 1. Section 09 30 00 "Tiling" for ceramic toilet and bath accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following:
 - 1. Construction details and dimensions.
 - 2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Material and finish descriptions.
 - 4. Features that will be included for Project.
 - 5. Manufacturer's warranty.
- B. Samples: Full size, for each accessory item to verify design, operation, and finish requirements.
 - 1. Approved full-size Samples will be returned and may be used in the Work.
- C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated.
2. Identify products using designations indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Warranty: Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.7 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.8 WARRANTY

- A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.
 1. Warranty Period: **[15]** <Insert number> years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, **0.031-inch (0.8-mm)** minimum nominal thickness unless otherwise indicated.

- B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.
- C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), **0.036-inch (0.9-mm)** minimum nominal thickness.
- D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with **G60 (Z180)** hot-dip zinc coating.
- E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.
- G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.
- I. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

- A. See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers. Retain one of first two paragraphs and list of manufacturers below. See Section 01 60 00 "Product Requirements."
- B. Manufacturers: Subject to compliance with requirements, [**provide products by one of the following**] [**available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following**]:
- C. **Basis-of-Design Product**: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. [A & J Washroom Accessories, Inc.](#)
 - 2. [American Specialties, Inc.](#)
 - 3. [Bobrick Washroom Equipment, Inc.](#)
 - 4. [Bradley Corporation.](#)
 - 5. [GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.](#)
 - 6. [Tubular Specialties Manufacturing, Inc.](#)
 - 7. **<Insert manufacturer's name>**.
- D. Toilet Tissue Roll Dispenser **<Insert drawing designation>**:
 - 1. **Consult FP&C for current multi-roll toilet tissue dispenser model and specifications.**
 - 2. **Alternate** Basis-of-Design Product (upon written approval of FP&C): **<Insert manufacturer's name; product name or designation>**
 - 3. Description:
 - 4. Mounting:
 - 5. Operation:
 - 6. Capacity:

7. Material and Finish: [**Stainless steel, No. 4 finish (satin)**]
- E. Paper Towel Roll Dispenser <Insert drawing designation>:
1. **Consult FP&C for current roll paper towel dispenser model and specifications.**
 2. **Alternate** Basis-of-Design Product (upon written approval of FP&C): <Insert manufacturer's name; product name or designation>.
 3. Mounting:
 4. Minimum Capacity:
 5. Material and Finish: [**Stainless steel, No. 4 finish (satin)**]
 6. Lockset:
 7. Refill Indicators:
- F. Waste Receptacle <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Mounting: [**Open top, recessed**] [**Self-closing disposal-opening cover, recessed**] [**Semirecessed**] [**Surface mounted**] [**Wall mounted for corner installation**] [**Freestanding**] [**Undercounter**] <Insert description>.
 3. Minimum Capacity: <Insert gal. (L)>.
 4. Material and Finish: [**Stainless steel, No. 4 finish (satin)**] <Insert material and finish>.
 5. Liner: [**Reusable vinyl liner**] <Insert liner description>.
 6. Lockset: Tumbler type for waste-receptacle.
- G. Combination Towel (Folded) Dispenser/Waste Receptacle <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: Combination unit for dispensing C-fold or multifold towels, with removable waste receptacle.
 3. Mounting: [**Surface mounted**] [**Surface mounted with stainless-steel collar**] [**Recessed**] [**Recessed with projecting receptacle**] [**Semirecessed**].
 - a. Designed for nominal [**4-inch (100-mm)**] [**6-inch (150-mm)**] wall depth.
 4. Minimum Towel-Dispenser Capacity: [**600 C-fold or 800 multifold paper towels**] <Insert capacity>.
 5. Minimum Waste-Receptacle Capacity: [**4 gal. (15 L)**] [**12 gal. (45.4 L)**] <Insert value>.
 6. Material and Finish: [**Stainless steel, No. 4 finish (satin)**] <Insert material and finish>.
 7. Liner: [**Reusable, vinyl waste-receptacle liner**] <Insert liner description>.
 8. Lockset: Tumbler type for towel-dispenser compartment[**and waste receptacle**].
- H. Combination Towel (Roll) Dispenser/Waste Receptacle <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: Combination unit for dispensing preset length of roll paper towels, with removable waste receptacle.
 3. Mounting: [**Recessed**] [**Semirecessed**] [**Surface mounted**].
 4. Minimum Towel-Dispenser Capacity: [**8-inch- (203-mm-) wide, 800-foot- (244-m-) long roll**] <Insert capacity>.

5. Minimum Waste Receptacle Capacity: [8 gal. (30 L)] [12 gal. (45.4 L)] [15 gal. (56.8 L)] <Insert value>.
 6. Material and Finish: [Stainless steel, No. 4 finish (satin)] <Insert material and finish>.
 7. Liner: [Reusable, vinyl waste-receptacle liner] <Insert liner description>.
 8. Lockset: Tumbler type for towel dispenser compartment [and waste receptacle].
 9. Lockset: Tumbler type.
- I. Liquid-Soap Dispenser <Insert drawing designation>:
1. Consult FP&C for current liquid soap dispenser model and specifications.
 2. Alternate Basis-of-Design Product (upon written approval of FP&C): <Insert manufacturer's name; product name or designation>
 3. Description: Designed for dispensing soap in [liquid or lotion] [lather] form.
 4. Mounting:
 5. Capacity: <Insert oz. (mL)>.
 6. Materials: <Insert requirements for valve and reservoir materials and finishes>.
 7. Lockset: Tumbler type.
 8. Refill Indicator: Window type.
- J. Grab Bar <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Mounting: Flanges with [concealed] [exposed] fasteners.
 3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.
 - a. Finish: Smooth, No. 4 finish (satin)[on ends and slip-resistant texture in grip area].
 4. Outside Diameter: [1-1/4 inches (32 mm)] [1-1/2 inches (38 mm)].
 5. Configuration and Length: [As indicated on Drawings] [Straight, 36 inches (914 mm) long] <Insert configuration and length>.
- K. Vendor <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Type: [Sanitary napkin] [Sanitary napkin and tampon] [Condom].
 3. Mounting: [Fully recessed, designed for 4-inch (100-mm) wall depth] [Semirecessed] [Surface mounted].
 4. Capacity: <Insert description>.
 5. Operation: [No coin (free)] [Single coin (25 cents)] [Two coin (50 cents)] <Insert description>.
 6. Exposed Material and Finish: [Stainless steel, No. 4 finish (satin)] <Insert material and finish>.
 7. Lockset: Tumbler type with separate lock and key for coin box.
- L. Sanitary-Napkin Disposal Unit <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Mounting: [Recessed] [Partition mounted, dual access] [Surface mounted].

3. Door or Cover: Self-closing, disposal-opening cover[**and hinged face panel with tumbler lockset**].
4. Receptacle: Removable.
5. Material and Finish: [**Stainless steel, No. 4 finish (satin)**] [**ABS plastic, gray**] <Insert material and finish>.

M. Seat-Cover Dispenser <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Mounting: [**Surface mounted**] [**Recessed**] [**Partition mounted, dual access**].
3. Minimum Capacity: [**250**] [**500**] <Insert number> seat covers.
4. Exposed Material and Finish: [**Stainless steel, No. 4 finish (satin)**] [**ABS plastic, gray**] <Insert material and finish>.
5. Lockset: Tumbler type.

N. Fold-Down Purse Shelf <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: Hinged unit with spring-loaded shelf that automatically returns to vertical position.
3. Nominal Size: [**15 inches (381 mm) long by 5-1/2 inches (140 mm) wide**] <Insert dimensions>.
4. Material and Finish: [**Chrome-plated, cast-zinc alloy (zamac) with stippled finish on tray or stainless steel, No. 4 finish (satin)**] [**Chrome-plated, cast-zinc alloy (zamac) with stippled finish on tray and bright chrome finish on edges**] [**Stainless steel, No. 4 finish (satin)**].

O. Mirror Unit <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Frame: [**Stainless-steel angle, 0.05 inch (1.3 mm) thick**] [**Stainless-steel channel**] [**Stainless steel, fixed tilt**] [**Stainless steel, adjustable tilt**].
 - a. Corners: [**Manufacturer's standard**] [**Mitered and mechanically interlocked**] [**Welded and ground smooth**].
3. Integral Shelf: **5 inches (127 mm)** deep.
4. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.
 - a. One-piece, galvanized-steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
 - b. Wall bracket of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.
5. Size: [**As indicated on Drawings**] <Insert dimensions>.

P. Facial Tissue Dispenser <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Mounting: [Wall mounted, recessed] [Surface mounted].
3. Nominal Depth: [2-1/4 inches (57 mm)] [4 inches (102 mm)] <Insert dimension>.
4. Capacity: [150] <Insert number> double-ply tissues.
5. Material and Finish:
 - a. Dispenser Face: [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
 - b. Cabinet: [Steel with corrosion-resistant finish] <Insert material and finish>.

2.3 PUBLIC-USE SHOWER ROOM ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 1. [A & J Washroom Accessories, Inc.](#)
 2. [American Specialties, Inc.](#)
 3. [Bobrick Washroom Equipment, Inc.](#)
 4. [Bradley Corporation.](#)
 5. [GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.](#)
 6. [Tubular Specialties Manufacturing, Inc.](#)
 7. <Insert manufacturer's name>.
- C. Shower Curtain Rod <Insert drawing designation>:
 1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: [1-inch (25.4-mm) OD; fabricated from nominal 0.0375-inch- (0.95-mm-) thick stainless steel] [1-1/4-inch (32-mm) OD; fabricated from nominal 0.05-inch- (1.3-mm-) thick stainless steel].
 3. Mounting Flanges: [Stainless-steel flanges designed for exposed fasteners] <Insert requirements>.
 4. Finish: [No. 4 (satin)] <Insert finish>.
- D. Shower Curtain <Insert drawing designation>:
 1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Size: Minimum [6 inches (152 mm)] [12 inches (305 mm)] wider than opening by 72 inches (1828 mm) high.
 3. Material: [Vinyl, minimum 0.006 inch (0.15 mm) thick, opaque, matte] [Duck, minimum 8 oz. (227 g), white, 100 percent cotton] [Nylon-reinforced vinyl, minimum 10 oz. (284 g) or 0.008-inch- (0.2-mm-) thick vinyl, with integral antibacterial agent] <Insert material>.
 4. Color: [White] [Green] [As selected from manufacturer's full range] <Insert color>.
 5. Grommets: Corrosion resistant at minimum 6 inches (152 mm) o.c. through top hem.

6. Shower Curtain Hooks: Chrome-plated or stainless-steel, spring wire curtain hooks with snap fasteners, sized to accommodate specified curtain rod. Provide one hook per curtain grommet.

E. Folding Shower Seat <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Configuration: [L-shaped seat, designed for wheelchair access] [Rectangular seat] [Triangular, corner-type seat] [Stainless-steel seat designed to fold into recessed-mounted, stainless-steel wall box].
3. Seat: [Phenolic or polymeric composite of slat-type or one-piece construction in color as selected by Architect] [White vinyl padded seat] [Stainless steel, No. 4 finish (satin); **0.05-inch (1.3-mm)** minimum nominal thickness; with single-piece, pan-type construction and edge seams welded and ground smooth] <Insert description>.
4. Mounting Mechanism: [Stainless steel, No. 4 finish (satin)] <Insert description>.
5. Dimensions: <Insert dimensions>.

F. Soap Dish <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: [With] [Without] washcloth bar.
3. Mounting: [Recessed] [Surface mounted].
4. Material and Finish: [Stainless steel, No. 4 finish (satin)] <Insert material and finish>.

2.4 PRIVATE-USE BATHROOM ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:

- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. Basco, Inc.
2. Bobrick Washroom Equipment, Inc.
3. Franklin Brass by Liberty Hardware Manufacturing Corporation; a Masco company.
4. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
5. Ginger; a Masco company.
6. Seachrome Corporation.
7. Tubular Specialties Manufacturing, Inc.
8. <Insert manufacturer's name>.

C. Toilet Tissue Dispenser <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: [Single-roll dispenser] [Double-roll dispenser] [Single-roll dispenser with hood] [Double-roll dispenser with hood] <Insert description>.
3. Mounting: [Recessed] [Surface mounted].

4. Capacity: Designed for **4-1/2- or 5-inch- (114- or 127-mm-)** diameter tissue rolls.
5. Material and Finish: **–[Stainless steel, No. 4 finish (satin)]**

D. Shower Curtain Rod **<Insert drawing designation>**:

1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>**.
2. Outside Diameter: **[1 inch (25.4 mm)] [1-1/4 inches (32 mm)]**.
3. Mounting: Flanges with **[exposed] [concealed]** fasteners.
4. Rod Material and Finish: **[Solid brass, polished] [Polished chrome-plated brass] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>**.
5. Flange Material and Finish: **[Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Polished chrome-plated zinc alloy (zamac)] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>**.
6. Accessories: Integral chrome-plated brass glide hooks.

E. Soap Dish **<Insert drawing designation>**:

1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>**.
2. Description: **<Insert description>**.
3. Mounting: **[Recessed] [Surface mounted]**.
4. Material and Finish: **[Solid brass, polished] [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Polished chrome-plated zinc alloy (zamac)] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>**.

F. Medicine Cabinet **<Insert drawing designation>**:

1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>**.
2. Mounting: **[Recessed, for nominal 4-inch (100-mm) wall depth] [Surface mounted]**.
3. Size: **[18 by 24 inches (460 by 610 mm)] <Insert dimensions>**.
4. Door: **[Framed mirror door concealing storage cabinet equipped with continuous hinge and spring-buffered, rod-type stop and magnetic door catch] <Insert description>**.
5. Shelves: **[Three, adjustable] <Insert requirements>**.
6. Material and Finish:
 - a. Cabinet: **[Stainless steel, No. 4 finish (satin)] [Steel with corrosion-resistant finish]**.
 - b. Mirror Frame: **<Insert material and finish>**.
 - c. Door: **<Insert material and finish>**.
 - d. Hinge: **<Insert material and finish>**.
 - e. Shelves: **<Insert material and finish>**.

G. Facial Tissue Dispenser **<Insert drawing designation>**:

1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>**.
2. Mounting: **[Wall mounted, recessed] [Surface mounted]**.

3. Depth: [2-5/8 inches (67 mm)] [4 inches (102 mm)] <Insert dimension>.
 4. Material and Finish:
 - a. Dispenser Face: [Polished chrome-plated brass] [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated steel] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
 - b. Cabinet: [Steel with corrosion-resistant finish] <Insert material and finish>.
- H. Robe Hook <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: [Double] [Single]-prong unit.
 3. Material and Finish: [Solid brass, polished] [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Polished chrome-plated zinc alloy (zamac)] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
- I. Toothbrush and Tumbler Holder <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: <Insert description>.
 3. Material and Finish: [Solid brass, polished] [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Polished chrome-plated zinc alloy (zamac)] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
- J. Towel Bar <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: [3/4-inch- (19-mm-) square tube with rectangular end brackets] [3/4-inch- (19-mm-) round tube with circular end brackets] <Insert description>.
 3. Mounting: Flanges with [concealed] [exposed] fasteners.
 4. Length: [18 inches (457 mm)] [24 inches (610 mm)] [30 inches (762 mm)] <Insert dimension>.
 5. Material and Finish: [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] [Polished aluminum] <Insert material and finish>.
- K. Towel Pin <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
 2. Description: Projecting minimum of [3 inches (75 mm)] [5 inches (127 mm)] from wall surface.
 3. Material and Finish: [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
- L. Towel Ring <Insert drawing designation>:
1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.

2. Description: Pin projecting approximately **2-1/2 inches (63 mm)** from wall with [square] [circular] [oval] [trapezoidal] ring.
3. Pin Material and Finish: [Solid brass, polished] [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated brass] [Polished chrome-plated zinc alloy (zamac)] [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.
4. Ring Material and Finish: [Matching pin] [Clear plastic].

M. Towel Shelf <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: Surface-mounted, guest-towel shelf with four [**3/8-inch- (9-mm-) diameter**] [**5/16-inch- (8-mm-) square**] stainless-steel tubes mounted in support arms.
 - a. Towel Bar: [**1/4-inch- (6-mm-) diameter**] [**5/16-inch- (8-mm-) square**] stainless-steel towel bar below shelf.
3. Length: [**18 inches (457 mm)**] [**24 inches (610 mm)**] <Insert dimension>.
4. Material and Finish: [Polished brass-plated, stainless-steel] [Polished chrome-plated, stainless-steel] [Stainless steel, No. 7 finish (polished)] <Insert material and finish>.

N. Towel Rack <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: [Surface-mounted, guest-towel unit with approximately **1/4-inch- (6-mm-) diameter wire rings welded to upright wire bracket**] <Insert description>.
3. Capacity: [Two] [Three] [Four] <Insert number> sets of bath towels, hand towels, and washcloths.
4. Nominal Height: [**11 inches (279 mm)**] [**17 inches (432 mm)**] [**21 inches (533 mm)**] <Insert dimension>.
5. Material and Finish: [Polished brass-plated zinc alloy (zamac)] [Polished chrome-plated zinc alloy (zamac)] <Insert material and finish>.

O. Retractable Clothesline <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: Surface-mounted [rectangular] [circular] housing with minimum **72-inch- (1829-mm-)** long, retractable, spring-actuated, synthetic clothesline and remote retention bracket.
3. Material and Finish [Chrome-plated brass] [Stainless steel, No. 7 finish (polished)].

P. Bottle Opener <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: Surface-mounted unit with [standard] [vandal-resistant] fasteners.
3. Material and Finish: [Stainless steel, No. 4 finish (satin)] [Stainless steel, No. 7 finish (polished)] [Chrome-plated steel].

2.5 WARM-AIR DRYERS

- A. Manufacturers: Subject to compliance with requirements, **[provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:**
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. [A & J Washroom Accessories, Inc.](#)
 2. [American Dryer, Inc.](#)
 3. [American Specialties, Inc.](#)
 4. [Bobrick Washroom Equipment, Inc.](#)
 5. [Bradley Corporation.](#)
 6. [Excel Dryer Corporation.](#)
 7. [GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.](#)
 8. [Tubular Specialties Manufacturing, Inc.](#)
 9. [World Dryer Corporation.](#)
 10. **<Insert manufacturer's name>.**
- C. Warm-Air Dryer **<Insert drawing designation>:**
1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>.**
 2. Mounting: **[Recessed] [Semirecessed] [Surface mounted].**
 3. Operation: **[Touch-button] [Electronic-sensor]** activated with timed power cut-off switch.
 - a. Operation Time: **[30 to 40] [80] <Insert number(s)>** seconds.
 4. Cover Material and Finish: **[Steel, with white enamel finish] [Cast iron, with enamel finish in color selected by Architect] [Chrome-plated steel] [Stainless steel, No. 4 finish (satin)] [Molded plastic, gray] [Molded plastic, white] <Insert material and finish>.**
 5. Electrical Requirements: **[115 V, 13 A, 1500 W] [115 V, 15 A, 1725 W] [115 V, 20 A, 2300 W] [208-240 V, 9-10 A, 1900-2300 W] <Insert electrical requirements>.**

2.6 CHILDCARE ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, **[provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:**
- B. Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. [American Specialties, Inc.](#)
 2. [Brocar Products, Inc.](#)
 3. [Diaper Deck & Company, Inc.](#)
 4. [GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.](#)

5. [Koala Kare Products; a division of Bobrick Washroom Equipment, Inc.](#)
6. [SSC, Inc.](#)
7. [Tubular Specialties Manufacturing, Inc.](#)
8. <Insert manufacturer's name>.

C. Diaper-Changing Station <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: [**Horizontal**] [**Vertical**] unit that opens by folding down from stored position and with child-protection strap.
 - a. Engineered to support a minimum of [**250-lb (113-kg)**] <Insert value> static load when opened.
3. Mounting: [**Surface mounted, with unit projecting not more than 4 inches (100 mm) from wall when closed**] [**Semirecessed, with unit projecting not more than 1 inch (25 mm) from wall when closed**].
4. Operation: By pneumatic shock-absorbing mechanism.
5. Material and Finish: [**HDPE in manufacturer's standard color**] [**HDPE with plastic-laminate insert in color selected by Architect**] [**Stainless steel, No. 4 finish (satin), with replaceable insulated polystyrene tray liner and rounded plastic corners**] [**Stainless steel, No. 4 finish (satin), exterior shell with rounded plastic corners; HDPE interior in manufacturer's standard color**] <Insert requirements>.
6. Liner Dispenser: Built in.

D. Diaper-Pack Vendor <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Mounting: [**Surface mounted**] [**Recessed**].
3. Minimum Capacity: [**100**] <Insert number> diaper packs.
4. Coin Operation: Coin slot preset for [**one U.S. dollar, adjustable up in 25-cent increments**] <Insert requirements>.
5. Material and Finish: [**Stainless steel, No. 4 finish (satin)**] <Insert material and finish>.

E. Child-Protection Seat <Insert drawing designation>:

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: Unit that opens by folding down from stored position and with child-protection strap.
 - a. Engineered to support a minimum of [**80-lb (36-kg)**] [**150-lb (68-kg)**] <Insert value> static load when opened.
3. Mounting: Surface mounted, with unit projecting not more than [**4-1/2 inches (114 mm)**] [**6 inches (152 mm)**] from wall when closed.
4. Material and Finish: [**HDPE in manufacturer's standard color**] <Insert requirements>.

2.7 UNDERLAVATORY GUARDS

- A. Manufacturers: Subject to compliance with requirements, **[provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:**
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. [Plumberex Specialty Products, Inc.](#)
 2. [Truebro by IPS Corporation.](#)
 3. **<Insert manufacturer's name>.**
- C. Underlavatory Guard **<Insert drawing designation>:**
1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>.**
 2. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.
 3. Material and Finish: Antimicrobial, molded plastic, white.

2.8 CUSTODIAL ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, **[provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:**
- B. **Basis-of-Design Product:** Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. [A & J Washroom Accessories, Inc.](#)
 2. [American Specialties, Inc.](#)
 3. [Bobrick Washroom Equipment, Inc.](#)
 4. [Bradley Corporation.](#)
 5. [GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.](#)
 6. [Tubular Specialties Manufacturing, Inc.](#)
 7. **<Insert manufacturer's name>.**
- C. Utility Shelf **<Insert drawing designation>:**
1. Basis-of-Design Product: **<Insert manufacturer's name; product name or designation>.**
 2. Description: With exposed edges turned down not less than **1/2 inch (13 mm)** and supported by two triangular brackets welded to shelf underside.
 3. Size: **[16 inches (406 mm) long by 6 inches (152 mm) deep]** **<Insert dimensions>.**
 4. Material and Finish: Not less than nominal **0.05-inch- (1.3-mm-)** thick stainless steel, No. 4 finish (satin).
- D. Mop and Broom Holder **<Insert drawing designation>:**

1. Basis-of-Design Product: <Insert manufacturer's name; product name or designation>.
2. Description: [Unit with shelf, hooks, holders, and rod suspended beneath shelf] <Insert description>.
3. Length: [36 inches (914 mm)] <Insert dimension>.
4. Hooks: [Three] <Insert number>.
5. Mop/Broom Holders: [Four] <Insert number>, spring-loaded, rubber hat, cam type.
6. Material and Finish: Stainless steel, No. 4 finish (satin).
 - a. Shelf: Not less than nominal 0.05-inch- (1.3-mm-) thick stainless steel.
 - b. Rod: Approximately 1/4-inch- (6-mm-) diameter stainless steel.

E. Paper Towel Roll Dispenser <Insert drawing designation>: Per 2.2.E above.

F. Liquid-Soap Dispenser <Insert drawing designation>: per 2.2.I above

2.9 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of [six] <Insert number> 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. Grab Bars: Install to withstand a downward load of at least 250 lbf (1112 N), when tested according to ASTM F 446.

3.2 ADJUSTING AND CLEANING

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

END OF SECTION 10 28 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. The Contractor's attention is specifically directed, but not limited, to the following documents for additional requirements:
 - 1. *Uniform General Conditions for Construction Contracts, State of Texas, 2010 (UGC).*
 - 2. *The University of Houston's Supplemental General Conditions and Special Conditions for Construction.*

1.2 SUMMARY

- A. Section Includes:
 - 1. Fire protection cabinets for the following:
 - a. Portable fire extinguishers.
 - b. Fire hose valves.
 - c. Fire hoses and racks.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire protection cabinets.
 - 1. 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.
 - 2. Show location of knockouts for hose valves.
- B. Shop Drawings: For fire protection cabinets. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
 - 1. Size: 6 by 6 inches square.
- D. Product Schedule: For fire protection cabinets. Coordinate final fire protection cabinet schedule with fire extinguisher schedule to ensure proper fit and function.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For fire protection cabinets to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Fire-Rated, Fire Protection Cabinets: Listed and labeled to comply with requirements in ASTM E 814 for fire-resistance rating of walls where they are installed.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.6 COORDINATION

- A. Coordinate size of fire protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.
- B. Coordinate sizes and locations of fire protection cabinets with wall depths.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Tempered Break Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 1.5 mm thick.
- B. Transparent Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), 1.5 mm thick, with Finish 1 (smooth or polished) .

2.2 FIRE PROTECTION CABINET ([Typical Installation](#) <Insert drawing designation>)

- A. Cabinet Type: Suitable for fire extinguisher.
 - 1. Basis of Design: Subject to compliance with requirements, provide fully recessed, stainless steel, solid door, Architectural Series, fire extinguisher cabinet by Larsen's Manufacturing Company; www.larsensmfg.com or comparable product by one of the following:
 - a. J. L. Industries, Inc., a division of Activar Construction Products Group; Cosmopolitan Series; www.jlindustries.com.
 - b. Modern Metal Products, Division of Technico Inc.; www.modern-metal.com.
 - c. Substitutions: See Section 01 25 00 - Substitution Procedures.
- B. Cabinet Construction: Nonrated.
- C. Cabinet Material: Stainless-steel sheet.
 - 1. Shelf: Same metal and finish as cabinet.
- D. Recessed Cabinet: Cabinet box recessed in walls of sufficient depth to suit style of trim indicated.
 - 1. Exposed Flat Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend).

- E. Cabinet Trim Material: Same material and finish as door.
 - F. Door Material: Stainless-steel sheet.
 - G. Door Style: Solid opaque panel with frame.
 - H. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - 1. Provide manufacturer's standard.
 - 2. Provide [continuous hinge, of same material and finish as trim,] permitting door to open 180 degrees.
 - I. Accessories:
 - 1. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as directed by Architect .
 - a. Identify fire extinguisher in fire protection cabinet with the words "FIRE EXTINGUISHER."
 - 1) Location: Applied to cabinet door.
 - 2) Application Process: Pressure-sensitive vinyl letters.
 - 3) Lettering Color: Black .
 - 4) Orientation: Vertical.
 - J. Finishes:
 - 1. Manufacturer's standard baked-enamel paint for the following:
 - a. Interior of cabinet.
 - 2. Stainless Steel: No. 4.
- 2.3 FIRE PROTECTION CABINETS (*Areas exposed to the elements and/or chemicals* <Insert drawing designation>)
- A. Cabinet Type: Suitable for fire extinguisher.
 - 1. Basis of Design: Subject to compliance with requirements, provide the following: fiberglass cabinets, manufactured by Thomas Products, www.thomasproducts.com.
 - a. Substitutions: See Section 01 25 00 - Substitution Procedures.
 - B. Cabinet Construction: Nonrated.
 - C. Cabinet Material: molded fiberglass.
 - D. Recessed Cabinet: Cabinet box recessed in walls of sufficient depth to suit style of trim indicated.
 - 1. Exposed Flat Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend).

- E. Semirecessed Cabinet: Cabinet box partially recessed in walls of sufficient depth to suit style of trim indicated; with one-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend). Provide where walls are of insufficient depth for recessed cabinets but are of sufficient depth to accommodate semirecessed cabinet installation.
- F. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim. Provide where walls are of insufficient depth for semirecessed cabinet installation.
- G. Cabinet Trim Material: Same material and finish as door.
- H. Door Material: Same material as cabinet.
- I. Door Style: Center glass panel with frame.
- J. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
- K. Accessories:
 - 1. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
 - 2. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as directed by Architect .
 - a. Identify fire extinguisher in fire protection cabinet with the words "FIRE EXTINGUISHER."
 - 1) Location: Applied to cabinet door.
 - 2) Application Process: Silk-screened.
 - 3) Lettering Color: White.
 - 4) Orientation: Horizontal.
- L. Finishes:
 - 1. Manufacturer's standard gloss red integral color.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where recessed and semirecessed cabinets will be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

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

3.3 INSTALLATION

- A. General: Install fire protection cabinets in locations and at mounting heights indicated or, if not indicated, at heights indicated below:

- 1. Fire Protection Cabinets: 54 inches above finished floor to top of cabinet.

- B. Fire Protection Cabinets: Fasten cabinets to structure, square and plumb.

- 1. Unless otherwise indicated, provide recessed fire protection cabinets. If wall thickness is not adequate for recessed cabinets, provide semirecessed fire protection cabinets.
 - 2. 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 cabinets 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 and mounting bracket manufacturers.
- E. Replace fire protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 10 44 13