SECTION 10 11 00 - VISUAL DISPLAY SURFACES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Markerboards.

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 chalkboards, markerboards, and tackboards.

1.4 SUBMITTALS, GENERAL

A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.

1.5 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.

C. Samples for Verification and Initial Color 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.
2. Include accessory Samples to verify color selected.
3. Visual Display Surface: Not less than 8-1/2 by 11 inches, mounted on substrate indicated for final Work. Include one panel for each type, color, and texture required.
4. Trim: 6-inch-long sections of each trim profile.

5. Display Rail: 6-inch-long sections.
6. Accessories: Full-size Sample of each type of accessory.

D. Warranties: Sample of special warranties.

1.6 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.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For visual display surfaces to include in maintenance manuals.
B. Warranties: Executed special warranties.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of motor-operated, sliding visual display units required for this Project.

B. Source Limitations: Obtain visual display surfaces from single source from single manufacturer.

C. 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.

1.9 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.

1.10 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install visual display surfaces until spaces are enclosed and weather tight, 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.

B. Field Measurements: Verify actual dimensions of construction contiguous with visual display surfaces by field measurements before fabrication.

1. Allow for trimming and fitting where taking field measurements before fabrication might delay the Work.

1.11 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.

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. Manufacturers: For convenience specifications and details are based on Claridge Products and Equipments, Inc. Harrison Arkansas, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. PolyVision Corporation; a Steelcase company.
b. Best-Rite Manufacturing.

2. Matte Finish: Low reflective; chalk wipes clean with dry cloth or standard eraser.
3. Gloss Finish: Gloss as indicated; dry-erase markers wipe clean with dry cloth or standard eraser.

B. Hardboard: ANSI A135.4, tempered.

C. Particleboard: ANSI A208.1, Grade M-1.

D. Fiberboard: ASTM C 208.

E. Extruded Aluminum: ASTM B 221, Alloy 6063.

F. 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-thick, porcelain-enamel face sheet with gloss finish.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc, Similar to "Vitracite Porcelain Enamel Steel Chalkboards" or comparable product by one of the following:

   a. Best-Rite Manufacturing.
   b. PolyVision Corporation; a Steelcase company. 500 Stationary series.

2. Particleboard Core: 3/8 inch thick; with 0.015-inch-thick, aluminum sheet backing.

3. Face Sheet: Min. 24 gauge steel with porcelain enamel finish suitable for use with liquid chalk markers similar to "LCS Liquid Chalk Writing System" by Claridge Products and Equipment Inc

4. Laminating Adhesive: Manufacturer's standard, moisture-resistant thermoplastic type.

5. Board units are to be magnetic.

2.3 BOARD UNIT ACCESSORIES

A. Aluminum Frames and Trim: Fabricated from not less than 0.062-inch-thick, extruded aluminum.

1. Factory-Applied Trim: Manufacturer's standard.

B. Chalk tray: Manufacturer's standard, continuous.

1. Solid Type: Extruded aluminum with ribbed section with screw on chalk trough end enclosures.

   a. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc.; "No. 262 Chalk Trough".

C. Map Rail: Provide the following accessories:

1. Integral Display Rail: Continuous and integral with map rail; fabricated from cork approximately 2 inches wide.

   a. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc.; Hang Tight Rail System".

2. End Stops: Located at each end of map rail.

   a. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc.; No. 74ES".

3. Map Hooks: Two map hooks for every 48 inches of map rail or fraction thereof.

   a. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc.; No. 76M Spring Clip Map Hook".

4. Flag Holder: One for each room.

   a. Basis-of-Design Product: Subject to compliance with requirements, provide Claridge Products and Equipment, Inc.; No.76FH Flag Holders".

2.4 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. 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.

C. 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.

2.5 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.

2.6 ALUMINUM FINISHES

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

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 roughing-in for electrical power systems to verify actual locations of connections before installation of motor-operated, sliding visual display units.

C. Examine walls and partitions for proper preparation and backing for visual display surfaces.

D. Examine walls and partitions for suitable framing depth where sliding visual display units will be installed.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

F. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

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.

1. Prime wall surfaces indicated to receive direct-applied, visual display tack wall panels and as recommended in writing by primer/sealer manufacturer and wall covering manufacturer.

D. Prepare recesses for sliding visual display units as required by type and size of unit.

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 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 o.c.

a. Attach chalktrays to boards with fasteners at not more than 12 inches 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 o.c.

3.6 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.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain motor-operated, sliding visual display units.

END OF SECTION 10 11 00

SECTION 10 14 00 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior unframed signs.

B. Scope: Provide room identification signs at all permanent rooms. Room identification signs to contain room names, room numbers, and graphics as indicated on Drawings and in Signage Schedule attached to this Section. Provide other signs as indicated on Drawings and in Signage Schedule attached to this Section.

1. Provide barrier-free and tactile signage at all locations required by Code and as indicated on Drawings.

1.3 DEFINITIONS

A. Accessible: In accordance with the accessibility standard.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner and signage Installer.

2. Review requirements for signage including, but not limited to, the following:

a. Size, configuration, and location of each sign.
b. Text, room name, room number, and graphics selections.
c. Color selections.
d. Sign Samples.
e. Sign quantities.

3. Review requirements for accessible signage.

4. Review requirements for mounting locations, heights, and types.

1.5 SUBMITTALS, GENERAL

A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.

1.6 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 signs.

1. Interior unframed signs.

B. Shop Drawings: For 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 other installers, and accessories.
3. Show message list, typestyles, graphic elements including raised characters and Braille and layout for each sign.
4. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

C. 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.

D. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), and as follows:

1. Signs: Full-size Sample of interior unframed sign.

E. Product Schedule: For signs. Use same designations indicated on Drawings or specified.

F. Sample Warranty: For special warranty.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: For signs to include in maintenance manuals.
B. Warranty: Executed special warranty.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.10 WARRANTY

A. Special Warranty: Manufacturer agrees to correct 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 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design", ICC A117.1, and building Code in effect for Project.

B. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 200 or less.
2. Smoke-Developed Index: 450 or less.

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, unless otherwise indicated, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. ASI Sign Systems, Inc., dba ASI.
2. Best Sign Systems, Inc.
3. Mohawk Sign Systems.

B. Source Limitations: Obtain signs from single source from single manufacturer.

2.3 INTERIOR UNFRAMED SIGNS

A. Interior Unframed Sign: Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; for interior use, and as follows:

1. Basis-of-Design Product: Subject to compliance with requirements, provide ASI; EmBoss ADA-Ready Sign System, or comparable product.

2. Sign Materials:

   a. Mounting Panel: 0.125-inch-thick acrylic.
   b. Face: 0.0015-inch-thick PVC/vinyl acetate bonded to mounting panel.

3. Fabrication:

   a. Graphics and Text: Accessible tactile copy and Grade 2 Braille (except as otherwise indicated). Color as selected by Architect from manufacturer's full range. Finish raised characters to contrast with background color, and finish Braille to match background color.

      1) Where "(#)" appears in Sign Type paragraph below, verify with Architect number to be used in place of "(#)".
      2) Where "(room name)" appears in Sign Type paragraph below, verify with Architect room name to be used in place of "(room name)".

   b. Typeface: As selected by Architect from manufacturer's full range.

   c. Background: Finish and color as selected by Architect from manufacturer's full range.

4. Mounting: Adhesive and two-face tape.

B. Sign Types:

1. Type 5: Room Name/Number Sign:

   a. Size: 6 inches by 6 inches.

   b. Text Size, Font Style, and Content:

      1) 1-inch-high (minimum) sans serif lettering: (#).
      2) 5/8-inch-high (minimum) sans serif lettering: (room name).

   c. Arrangement: Two lines where needed.

2. Type 8: Girls/Women's Restroom Sign:

   a. Size: 6 inches by 6 inches.
   b. Graphics: Female symbol, and wheelchair accessibility symbol if applicable.
   c. Use with Type 7 Room Sign.

3. Type 9: Boys/Men's Restroom Sign:

    a. Size: 6 inches by 6 inches.
    b. Graphics: Male symbol, and wheelchair accessibility symbol if applicable.
    c. Use with Type 7 Room Sign.

4. Type 10: Restroom Sign:

    a. Size: 6 inches by 6 inches.
    b. Graphics: Male/female symbol, and wheelchair accessibility symbol if applicable.
    c. Use with Type 7 Room Sign.

5. Type 10a: Restroom Sign:

    a. Size: 8 inches by 8 inches.
    b. Graphics: Gender neutral/wheelchair accessibility symbol.

2.4 ACCESSORIES

A. Adhesive: As recommended by sign manufacturer.

    1. Verify adhesives have a VOC content of 70 g/L or less.

B. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch thick, with adhesive on both sides.

2.5 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

    1. Drill and tap for required fasteners. Use exposed fasteners that match sign finish.

B. Tactile and Braille Characters: In compliance with listed accessibility standard in "Performance Requirements" Article, raised 1/32-inch minimum above background.

2.6 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 the 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 anchorage devices embedded in permanent construction are correctly sized and located to accommodate signs.
D. Proceed with installation only after unsatisfactory conditions have been corrected.
E. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

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.

B. Accessibility: Install signs in locations as indicated on Drawings and according to the accessibility standard.

C. Mounting Locations: Locate on wall adjacent to latch side of door 60 inches from center of sign to finished floor, and 2 inches from edge of door frame. Where adequate wall space adjacent to latch side of door is not available, and at double-leaf doors, place sign on nearest adjacent wall.

D. Mounting Methods:

1. 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.

2. 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.

E. 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.

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 corrected by finish touchup or similar minor corrective 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.

Attachment: Signage Schedule

END OF SECTION 10 14 00

COLOR	ROOM NO.	SIGNAGE TYPE	SIGNAGE TEXT	REMARKS
			Senior High School	
	121	7/9	Name by District	Type 1 & 5 at all doors
	120	8/9	Name by District	
	120A	5	Name by District	
	109	5	Name by District	
	B41C	5	Name by District	
	B41	5	Name by District	Type 5 at all doors
	B41B	5	Name by District	
	B41A	5	Name by District	
	B40	5	Name by District	
	B40A	5	Name by District	
	109A	5	Name by District	
	150A	5	Name by District	
	153B	5	Name by District	
	153C	5	Name by District	
	153D	5	Name by District	
	153	5	Name by District	Type 5 at all doors
	153A	7/8	Name by District	
	153E	5	Name by District	
	153G	5	Name by District	
	153F	5	Name by District	
	151	5	Name by District	Type 5 at all doors
	151A	5	Name by District	
	151E	5	Name by District	
	151B	5	Name by District	
	151G	5	Name by District	
	151C	7/9	Name by District	
	151D	5	Name by District	
			John G. Borden Middle School	
	218I	5	Name by District	
	142	5	Name by District	Type 5 at all doors
	108	7/8	Name by District	
	107	7/9	Name by District	
	138	5	Name by District	Type 5 at all doors
	139	5	Name by District	

PLEASE REFER TO PARAGRAPH 1.4 – PREINSTALLATION MEETINGS IN REGARDS TO SIGNAGE REQUIREMENTS.

SECTION 10 21 13.19 - PLASTIC TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Solid-plastic toilet compartments.

1.3 COORDINATION

A. Coordinate requirements for blocking, reinforcing, and other supports concealed within wall to ensure that toilet compartments can be supported and installed as indicated.

1.4 SUBMITTALS, GENERAL

A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.

1.5 ACTION SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

1. Door hardware and accessories.
2. Overhead bracing.
3. Stiffener.
4. Anchorage and fasteners.

B. As-Specified Data: If the product to be incorporated into Project is as specified by manufacturer name and product designation in Part 2 of this Specification Section, submit the "**As-Specified Verification Form**" (attached to Division 01 Section "Submittal Procedures") for item listed below; otherwise submit full Product Data for the following:

1. Solid-plastic toilet compartments:

C. Shop Drawings:

1. Include plans, elevations, sections, details, and attachment details.
2. Show locations of centerlines of plumbing fixtures.
3. Show locations of floor drains.

D. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of toilet compartment.

E. Samples for Verification: Actual sample of finished products for each type of toilet compartment.

1. Size: Manufacturer's standard size.

F. Sample Warranty: For special warranty.

1.6 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment by manufacturer indicating compliance with performance requirements.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For toilet compartments.
B. Warranty: Executed special warranty

1.8 FIELD CONDITIONS

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

1.9 WARRANTY

A. Special Warranty: Manufacturer agrees to correct or replace components of plastic toilet compartments that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Not less than 25 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain plastic toilet compartments from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Fire Performance: Tested in accordance with, and pass the acceptance criteria of, NFPA 286.

B. Fire-Test-Response Characteristics:

1. Burning extent of 1 inch or less when tested according to ASTM D635 on plastic sheets in thicknesses indicated for the Work.
2. Self-ignition temperature of 650 deg F or higher when tested according to ASTM D1929 on plastic sheets in thicknesses indicated for the Work.
3. Smoke density of 75 or less when tested according to ASTM D2843 on plastic sheets in thicknesses indicated for the Work.

C. Structural Performance: Where grab bars are mounted on toilet compartments, design panels to comply with the following requirements:

1. Panels are able to withstand a concentrated load on grab bar of at least 250 lbf applied at any direction and at any point, without deformation of panel.

D. Regulatory Requirements: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design," ICC A117.1, and building Code in effect for Project for toilet compartments designated as accessible.

2.3 SOLID-PLASTIC TOILET COMPARTMENTS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

1. ASI Global Partitions; Solid Plastic (HDPE), No Sight-55 Floor Mounted Overhead Braced.
2. General Partitions Mfg. Corp.; High Density Polymer (HDPE), Series 40-7 no sight strike Floor Supported - Headrail.
3. Scranton Products; Hiny Hiders Toilet Partitions 55 privacy type door and panel height, floor mounted overhead-braced.

B. Toilet-Enclosure Style: Overhead braced, floor anchored.

C. Urinal-Screen Style: Overhead braced, floor anchored.

D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color throughout thickness of material. Provide with no-sightline system consisting of door and pilaster lapped edges on strike side of door.

1. Door and Panel Height: Not less than 55 inches.

2. Door and Panel Mounting Height: 14 inches above finish floor.

3. Pilaster Height: Not less than 82 inches.

4. Integral Hinges: Configure doors and pilasters to receive integral hinges.

5. Heat-Sink Strip: Manufacturer's continuous, extruded aluminum or stainless steel strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.

6. Color: One color in each room as selected by Architect from manufacturer's full range.

E. Urinal-Screen Construction: Matching panel construction.

F. Pilaster Shoes: Manufacturer's standard design; stainless steel.

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; extruded aluminum or stainless steel.

2.4 HARDWARE AND ACCESSORIES

A. Door Hardware and Accessories, Heavy Duty: Manufacturer's heavy-duty institutional operating hardware and accessories.

1. Hinges: Manufacturer's minimum 0.062-inch-thick, stainless steel continuous, spring-loaded type, allowing emergency access by lifting door. Mount with through bolts.

2. Latch and Keeper: Manufacturer's heavy-duty, surface-mounted, cast stainless steel latch unit, designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at toilet enclosures designated as accessible. Mount with through bolts.

3. Coat Hook: Manufacturer's heavy-duty, combination cast stainless steel hook and rubber-tipped bumper, sized to prevent inswinging door from hitting compartment-mounted accessories. Mount with through bolts.

4. Door Bumper: Manufacturer's heavy-duty, rubber-tipped, cast stainless steel bumper at outswinging doors. Mount with through bolts.

5. Door Pull: Manufacturer's heavy-duty, cast stainless steel pull at outswinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at toilet enclosures designated as accessible. Mount with through bolts.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

C. Stiffener: Manufacturer’s standard continuous, aluminum stiffener in manufacturer’s standard finish, where recommended by manufacturer for bracing hinge-side pilasters.

D. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel.

2.5 MATERIALS

A. Aluminum Castings: ASTM B26/B26M.
B. Aluminum Extrusions: ASTM B221.
C. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.
D. Stainless Steel Castings: ASTM A743/A743M.

2.6 FABRICATION

A. Fabricate toilet compartment components to sizes indicated. Coordinate requirements for attachment of toilet accessories.

B. Overhead-Braced, Floor-Anchored Units: Manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters and walls to suit floor and wall conditions. Provide shoes at pilasters to conceal supports and leveling mechanism. Provide with continuous head rail.

1. Overhead-Braced, Floor-Anchored Urinal-Screen Posts: Manufacturer's standard corrosion-resistant anchoring assemblies at posts and walls, with leveling adjustment nuts at bottoms of posts. Provide shoes at posts to conceal anchorage.

C. Door Size and Swings: Unless otherwise indicated, provide 24-inch-wide, inswinging doors for standard toilet enclosures (centered between compartment side walls) and 36-inch-wide, outswinging doors with a minimum 32-inch-wide, clear opening for toilet enclosures designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.

1. Confirm location and adequacy of blocking and supports required for installation.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

3.2 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 or Screens: 1/2 inch.
b. Panels or Screens and Walls: 1 inch.

2. Full-Height (Continuous) Brackets: Secure panels or screens to walls and to pilasters with full-height brackets.

a. Locate bracket fasteners, so holes for wall anchors occur in masonry or tile joints.
b. Align brackets at pilasters with brackets at walls.

B. Overhead-Braced, Floor-Anchored Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches 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.

1. Overhead-Braced, Floor-Anchored Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.3 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware in accordance with hardware manufacturer's written instructions for proper operation. Set hinges on inswinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on outswinging doors and doors for compartments designated as accessible to return doors to fully closed position.

END OF SECTION 10 21 13.19

SECTION 10 22 13 - WIRE MESH PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Standard-duty wire mesh partitions.

1.3 SUBMITTALS, GENERAL

A. General: Submit all action submittals (except Samples for Verification) required by this Section concurrently.

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 wire mesh items.

1. Standard-duty wire mesh partitions.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Setting Drawings: For anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry.

D. Samples: For units with factory-applied color finishes.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For wire mesh unit hardware to include in maintenance manuals.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver wire mesh items with cardboard protectors on perimeters of panels and doors and with posts wrapped to provide protection during transit and Project-site storage. Use vented plastic.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of construction contiguous with wire mesh units by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Acorn Wire & Iron Works, LLC.
2. G-S Company (The).
3. Miller Wire Works, Inc.
4. Standard Wire & Steel Works.

2.2 MATERIALS

A. Steel Wire: ASTM A 510.

B. Steel Plates, Channels, Angles, and Bars: ASTM A 36/A 36M.

C. Panel-to-Panel Fasteners: Manufacturer's standard steel bolts, nuts, and washers.

D. Post-Installed Anchors: Capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency.

1. Stainless Steel: Alloy Group 1 or 2 stainless steel bolts, ASTM F 593, and nuts, ASTM F 594.

2.3 STANDARD-DUTY WIRE MESH PARTITIONS

A. Mesh: 0.135-inch-diameter, intermediate-crimp steel wire woven into 1-1/2-inch diamond mesh.

B. Vertical Panel Framing: 1-1/4-by-5/8-by-0.080-inch cold-rolled, C-shaped steel channels with holes for 1/4-inch-diameter bolts not more than 12 inches on center.

C. Horizontal Panel Framing: 1-by-1/2-by-1/8-inch cold-rolled steel channels.

D. Horizontal Panel Stiffeners: Two cold-rolled steel channels, 3/4 by 3/8 by 1/8 inch, bolted or riveted toe to toe through mesh or one 1-by-1/2-by-1/8-inch cold-rolled steel channel with wire mesh woven through channel.

E. Top Capping Bars: 2-1/4-by-1-inch cold-rolled steel channels.

F. Posts for 90-Degree Corners: 1-1/4-by-1-1/4-by-1/8-inch steel angles or square tubes with holes for 1/4-inch-diameter bolts aligning with bolt holes in vertical framing; with floor anchor clips.

G. Posts for Other-Than 90-Degree Corners: Steel pipe or tubing with holes for 1/4-inch-diameter bolts aligning with bolt holes in vertical framing; with floor anchor clips.

1. Partitions up to 12 Feet High: 1-1/4-inch OD by 1/8 inch.
2. Partitions up to 20 Feet High: 2-1/2-inch OD by 1/8 inch.

H. Line Posts: 3-inch-by-4.1-lb or 3-1/2-by-1-1/4-by-0.127-inch steel channels; with 5-by-18-by-1/4-inch steel base plates.

I. Floor Shoes: Metal, not less than 2 inches high; sized to suit vertical framing, drilled for attachment to floor, and with set screws for leveling adjustment.

J. Swinging Doors: Fabricated from same mesh as partitions, with framing fabricated from 1-1/4-by-1/2-by-1/8-inch steel channels or 1-1/4-by-5/8-by-0.080-inch cold-rolled, C-shaped steel channels, banded with 1-1/4-by-1/8-inch flat steel bar cover plates on three sides, and with 1/8-inch-thick angle strike bar and cover on strike jamb.

1. Hinges: Full-surface type, 3-by-3-inch steel, 1-1/2 pairs per door; bolted, riveted, or welded to door and jamb framing.
2. Cylinder Lock: Mortise type with manufacturer's standard cylinder; operated by key outside and recessed turn knob inside.

K. Finish: Enamel finish or powder-coated finish unless otherwise indicated.

1. Color: As selected by Architect from manufacturer's full range.

2.4 FABRICATION

A. General: Fabricate wire mesh items from components of sizes not less than those indicated. Use larger-sized components as recommended by wire mesh item manufacturer. Furnish bolts, hardware and accessories required for complete installation, with manufacturer's standard finishes.

B. Standard-Duty Wire Mesh Partitions: Fabricate wire mesh partitions with cutouts for pipes, ducts, beams, and other items indicated. Finish edges of cutouts to provide a neat, protective edge.

1. Mesh: Securely clinch mesh to framing.

2. Framing: Fabricate framing with mortise and tenon corner construction.

a. Provide horizontal stiffeners as indicated or, if not indicated, as required by panel height and as recommended by wire mesh partition manufacturer. Weld horizontal stiffeners to vertical framing.

b. Fabricate three- and four-way intersections using manufacturer's standard connecting clips and fasteners.

3. Fabricate wire mesh partitions with 3 to 4 inches of clear space between finished floor and bottom horizontal framing.

4. Doors: Align bottom of door with bottom of adjacent panels.

   a. For doors that do not extend full height of partition, provide transom over door, fabricated from same mesh and framing as partition panels.

5. Hardware Preparation: Mortise, reinforce, drill, and tap doors and framing as required to install hardware.

2.5 STEEL AND IRON FINISHES

A. Enamel or Powder-Coat Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on powder-coat finish, suitable for use indicated, with a minimum dry film thickness of 2 mils.

   1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
B. Examine floors for suitable conditions where wire mesh items will be installed.
C. Examine walls to which wire mesh items will be attached for properly located blocking, grounds, and other solid backing for attachment of support fasteners.
D. Proceed with installation only after unsatisfactory conditions have been corrected.
E. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

3.2 WIRE MESH PARTITIONS ERECTION

A. Anchor wire mesh partitions to floor with 3/8-inch-diameter, postinstalled expansion anchors at 12 inches o.c. through floor shoes located at each post and corner. Adjust wire mesh partition posts in floor shoes to achieve level and plumb installation.

B. Anchor wire mesh partitions to walls at 12 inches o.c. through back corner panel framing and as follows:

   1. For concrete and solid masonry anchorage, use expansion anchors.
   2. For hollow masonry anchorage, use toggle bolts.
   3. For steel-framed gypsum board assemblies, use lag bolts set into wood backing between studs. Coordinate with stud installation to locate backing members.

C. Secure top capping bars to top framing channels with 1/4-inch-diameter "U" bolts spaced not more than 28 inches o.c.

D. Provide line posts at locations indicated or, if not indicated, as follows:

1. For partitions that are 7 to 9 feet high, spaced at 15 to 20 feet o.c.
2. For partitions that are 10 to 12 feet high, located between every other panel.
3. For partitions that are more than 12 feet high, located between each panel.

E. Where standard-width wire mesh partition panels do not fill entire length of run, provide adjustable filler panels to fill openings.

F. Install doors complete with door hardware.

G. Bolt accessories to wire mesh partition framing.

3.3 ADJUSTING AND CLEANING

A. Adjust doors to operate smoothly and easily, without binding or warping. Adjust hardware to function smoothly. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Remove and replace defective work including doors and framing that are warped, bowed, or otherwise unacceptable.

C. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION 10 22 13

SECTION 10 22 26.13 - ACCORDION FOLDING PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Manually operated, accordion folding partitions.

1.3 DEFINITIONS

A. STC: Sound Transmission Class.

1.4 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design accordion folding partitions, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Acoustical Performance: Provide accordion folding partitions tested by a qualified testing agency for the following acoustical properties according to test methods indicated:

1. Sound-Transmission Requirements: Accordion folding partition assembly tested in a laboratory for sound transmission loss performance according to ASTM E 90, calculated according to ASTM E 413, and rated for not less than the STC value indicated.

1.5 SUBMITTALS, GENERAL

A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1. Suspension system.
2. Vinyl-coated fabric.

B. As-Specified Data: If the product to be incorporated into Project is as specified by manufacturer name and product designation in Part 2 of this Specification Section, submit the "**As-Specified Verification Form**" (attached to Division 01 Section "Submittal Procedures") for each item listed below, otherwise submit full Product Data for the following:

1. Accordion folding partition.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Indicate storage and operating clearances. Indicate location and installation requirements for hardware and track, blocking, and direction of travel.

D. Samples: For each type of exposed material, facing material, and finish indicated, prepared on Samples of size indicated below:

1. Facing Material: Manufacturer's standard-size unit, not less than 3 inches square.

E. Delegated-Design Submittal: For accordion folding partitions indicated to comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by the qualified professional engineer responsible for their preparation.

F. Warranty: Sample of special warranty.

1.7 INFORMATIONAL SUBMITTALS

A. Setting Drawings: For embedded items and cutouts required in other work.

1.8 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For accordion folding partitions to include in maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:

1. Facing materials and finishes for exposed trim and accessories. Include precautions for cleaning materials and methods that could be detrimental to finishes and performance.
2. Seals, hardware, track, carriers, and other operating components.

B. Warranty: Executed special warranty.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Fire-Test-Response Characteristics: Provide partitions with finishes meeting the following as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Surface-Burning Characteristics: As determined by testing per ASTM E 84.

    a. Flame-Spread Index: 25 or less.
    b. Smoke-Developed Index: 450 or less.

2. Fire Growth Contribution: Meeting acceptance criteria of local code and authorities having jurisdiction when tested according to NFPA 286.

C. Preinstallation Conference: Conduct conference at Project site.

1.10 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of accordion folding partition openings by field measurements before fabrication.

1.11 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of accordion folding partitions that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Faulty operation of accordion folding partitions.
    b. Deterioration of metals, metal finishes, and other materials beyond normal wear.

2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCORDION FOLDING PARTITION

A. Accordion Folding Partition: Accordion folding frame with pantograph or hinged sections designed for horizontal extension and retraction, covered with decorative facing material, reinforced for hardware attachment, supported by overhead suspension system, and equipped with manufacturer's standard air-release method to prevent billowing.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Hufcor, Inc.; Series 3900.
    b. Modernfold, Inc.; a DORMA Group company; Soundmaster 8[**M**] [**E**].

B. Partition Type: Single fixed jamb partition with the following hardware:

1. Lead Post Latching Hardware: Latch on both sides secured to meeting post striker.
2. Lead Post Locking Hardware: Key-operated lock cylinder, keyed to master key system, operable from both sides of post.
3. Meeting Post: Floating, with meeting/closing arrangement as indicated on Drawings.
4. Storage-End Hardware: Same as lead post, secured to surface jamb striker.
5. Pendant Pull: Near top of lead post in addition to standard pull handle/latch for units more than 10 feet high or 20 feet wide, or both.

C. STC Rating: Not less than 39.

D. Facing Material: Vinyl-coated fabric.

1. Color/Pattern: As selected by Architect from manufacturer's full range.

2.2 COMPONENTS

A. Posts and Seals: Provide types of posts and seals that produce accordion folding partitions complying with performance requirements.

1. Posts: Steel or aluminum; formed with deep-nesting and interlocking interfaces and fabricated to ensure rigidity of accordion folding partition.
2. Perimeter Seals: Manufacturer's standard vinyl, neoprene, or woven silica vertical seals, horizontal top and bottom seals, and closures for lead posts and jambs.

B. Hardware: Manufacturer's standard manually operated pulls, latches, locks, and bolts as required to operate accordion folding partitions; with decorative, protective finish.

C. Trim: Manufacturer's standard with decorative, protective finish.

D. Tiebacks: As required to maintain accordion folding partitions in stacked position; with manufacturer's standard finish.

2.3 SUSPENSION SYSTEMS

A. Suspension Tracks: Steel or aluminum designed for type of operation, size, and weight of accordion folding partition indicated. Size track to support partition operation and storage without damage to suspension system, accordion folding partitions, or adjacent construction. Limit track deflection to no more than 0.10 inch between bracket supports. Provide a continuous system of track sections and accessories to accommodate configuration and layout indicated for partition operation and storage.

1. Track: Recessed.

a. Head Closure Trim and Track Channel Pocket: For protecting overhead surfaces and enclosing overhead track opening; with factory-applied, decorative, protective finish.

B. Carriers: Trolley system as required for size and weight of partition and for easy, quiet operation; with four-wheel ball-bearing carriers at lead post and two-wheel ball-bearing carriers at intermediate panel supports.

1. Wheels: Manufacturer's standard.

C. Track Switches and Accessories: Manufacturer's standard switches as required for type of operation, storage, track configuration, and layout indicated.

D. Aluminum Finish: Mill finish or manufacturer's standard, factory-applied, decorative finish unless otherwise indicated.

E. Steel Finish: Factory-applied, corrosion-resistant, protective coating unless otherwise indicated.

2.4 FACING MATERIALS

A. General: Provide facing materials with appropriate backing that comply with indicated fire-test-response characteristics, and that are factory attached to accordion folding partitions with concealed fasteners.

1. Factory-apply facing material free of air bubbles, wrinkles, blisters, and other defects; and with no gaps or overlaps. Tightly secure and conceal raw and selvage edges of facing material for finished appearance. Horizontal butted edges or seams are not permitted.

2. Where facing material with directional or repeating pattern, directional weave, or matching grain is indicated, mark facing-material top and attach facing material in same direction.

B. Vinyl-Coated Fabric: Manufacturer's standard mildew-resistant, washable, vinyl-coated fabric wall covering; complying with CFFA-W-101-D for Type II or Type III; Class A.

1. Total Weight: 30 ounces per lineal yard.
2. Antimicrobial Treatment: Additives capable of inhibiting growth of bacteria, fungi, and yeasts.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of accordion folding partitions.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

3.2 INSTALLATION

A. General: Comply with ASTM E 557 except as otherwise required by accordion folding partition manufacturer's written installation instructions. Install accordion folding partitions level and plumb, with tight joints and uniform appearance, and free of deformation and surface and finish irregularities.

B. Install accordion folding partitions and accessories after other finishing operations, including painting, have been completed.

3.3 ADJUSTING

A. Adjust accordion folding partitions to operate smoothly, without warping or binding. Lubricate hardware and other moving parts.

3.4 CLEANING

A. Clean soiled surfaces of accordion folding partitions, to remove dust, loose fibers, fingerprints, adhesives, and other foreign materials according to manufacturer's written instructions.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain accordion folding partitions.

END OF SECTION 10 22 26.13

SECTION 10 28 00 - TOILET AND SHOWER ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Toilet accessories.
2. Shower accessories.

1.3 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.

1.4 SUBMITTALS, GENERAL

A. General: Submit all action submittals required by this Section concurrently.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Include electrical characteristics.

B. As-Specified Data: If the product to be incorporated into Project is as specified by manufacturer name and product designation in Part 2 of this Specification Section, submit the "**As-Specified Verification Form**" (attached to Division 01 Section "Submittal Procedures") for each item listed below, otherwise submit full Product Data for the following:

1. Grab bar.
2. Sanitary-napkin disposer.

3. Mirror, glass.
4. Shower curtain rod.
5. Shower curtain (and hooks).
6. Shower seat, folding, L-shaped type.
7. Robe hook.

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 accessories using designations indicated.

D. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.
B. Warranty: Executed special warranty.

1.7 WARRANTY

A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to correct or replace mirrors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, visible silver spoilage defects.
2. Warranty Period: 15 years from date of Substantial Completion.

B. Manufacturer’s Special Warranty for Electric Hand Dryers: Manufacturer agrees to correct or replace hand dryers that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Not less than 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 OWNER-FURNISHED MATERIALS

A. Owner-Furnished Materials for Installation by Contractor:

1. Toilet tissue dispenser.
2. Paper towel dispenser (roll).
3. Soap dispenser.
4. Soap Shelf.

2.2 PERFORMANCE REQUIREMENTS

A. 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.

B. Structural Performance: Design accessories and fasteners to comply with the following requirements:

1. Grab Bars: Installed units are able to resist 250 lbf concentrated load applied in any direction and at any point.
2. Shower Seats: Installed units are able to resist 250 lbf applied in any direction and at any point.

2.3 TOILET ACCESSORIES

A. Source Limitations: Obtain toilet accessories from single source from single manufacturer unless manufacturer does not offer product listed.

B. Grab Bar GB:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. American Specialties, Inc.; 3800-P Series.
b. Bobrick Washroom Equipment, Inc.; B-6806.99 Series.
c. Bradley Corporation; 812-2 Series.

2. Mounting: Flanges with concealed fasteners.

3. Material: Stainless steel, 0.05 inch thick.

a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin) on ends and slip-resistant texture in grip area.

4. Outside Diameter: 1-1/2 inches.

5. Configuration and Length: As indicated on Drawings.

C. Sanitary-Napkin Disposer SND:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. American Specialties, Inc.; 0473-1A.
b. Bobrick Washroom Equipment, Inc.; B-254.
c. Bradley Corporation; 4722-15.

2. Mounting: 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, ASTM A480/A480M No. 4 finish (satin).

D. Mirror, Glass MG:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. American Specialties, Inc.; 0620-B.
   b. Bobrick Washroom Equipment, Inc.; B-1658.
   c. Bradley Corporation; 781-2.

2. Frame: Stainless-steel channel.

   a. Corners: Manufacturer's standard.

3. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.

   a. Wall bracket of steel, equipped with concealed locking devices requiring a special tool to remove.

4. Mirror Glazing: Tempered clear glass.

5. Size: As indicated on Drawings.

2.4 SHOWER ACCESSORIES

A. Source Limitations: Obtain shower room from single source from single manufacturer unless manufacturer does not offer product listed.

B. Shower Curtain Rod SCR:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. American Specialties, Inc.; 1204.
   b. Bobrick Washroom Equipment, Inc.; B-6047.
   c. Bradley Corporation; 9531.

2. Description: 1-1/4-inch OD; fabricated from nominal 0.05-inch-thick stainless steel.

3. Mounting Flanges: Stainless-steel flanges designed for exposed fasteners.

4. Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

C. Shower Curtain (and Hooks) SC:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. American Specialties, Inc.; 1200-V42 curtain and 1200-SHU hooks.
   b. Bobrick Washroom Equipment, Inc.; B-204-2 curtain and B-204-1 hooks.
   c. Bradley Corporation; 9537-42 curtain and 9536 hooks.

2. Size: Minimum 10 inches wider than opening by 72 inches high.

3. Material: Nylon-reinforced vinyl, minimum 9 oz. or 0.008-inch-thick vinyl, with integral antibacterial agent.

4. Color: White.

5. Grommets: Corrosion resistant at minimum 6 inches 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.

D. Shower Seat, Folding SSF:

1. L-Shaped Type:

a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

1) American Specialties, Inc.; 8206.
2) Bobrick Washroom Equipment, Inc.; B-5181.
3) Bradley Corporation; 9569.

b. Configuration: L-shaped seat, designed for wheelchair access.

c. Seat: Phenolic of one-piece construction.

d. Mounting Mechanism: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

E. Robe Hook RH:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. American Specialties, Inc.; 7345-S.
b. Bobrick Washroom Equipment, Inc.; B-76727.
c. Bradley Corporation; 9124.

2. Description: Double-prong unit.

3. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

2.5 MATERIALS

A. Fasteners: Screws, bolts, and other devices of same material as accessory unit, unless otherwise recommended by manufacturer or specified in this Section, and tamper-and-theft resistant where exposed, and of stainless or galvanized steel where concealed.

B. Tempered Clear Glass Mirrors: Mirror Glazing Quality, for blemish requirements; and comply with ASTM C 1048 for Kind FT, Condition A, tempered float glass before silver coating is applied; nominal 6.0 mm thick.

2.6 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 keys to Owner.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of accessories.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

3.2 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 comply with specified structural-performance requirements.

C. Shower Seats: Install to comply with specified structural-performance requirements.

3.3 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 instructions.

END OF SECTION 10 28 00

SECTION 10 51 13 - METAL LOCKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Welded athletic lockers.
2. Locker benches.

1.3 SUBMITTALS, GENERAL

A. General: Submit all action submittals required by this Section concurrently.

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.

1. Locker benches.

B. As-Specified Data: If the product to be incorporated into Project is as specified by manufacturer name and product designation in Part 2 of this Specification Section, submit the "**As-Specified Verification Form**" (attached to Division 01 Section "Submittal Procedures") for each item listed below, otherwise submit full Product Data for the following:

1. Welded athletic lockers.

C. Shop Drawings: For metal lockers.

1. Include plans, elevations, sections, and attachment details.
2. Show locker trim and accessories.
3. Include locker identification system and numbering sequence.

D. Samples: Manufacturer's color charts showing the full range of colors available.

E. Product Schedule: For lockers. Use same designations indicated on Drawings.

F. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For adjusting, correcting, and replacing locker doors and latching mechanisms to include in maintenance manuals.
B. Executed Warranty: For special warranty.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for their installation.
B. Deliver master and control keys and combination control charts to Owner by registered mail or overnight package service.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

1.8 COORDINATION

A. Coordinate sizes and locations of bases for metal lockers.

B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.9 WARRANTY

A. Special Warranty: Manufacturer agrees to correct or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures.
b. Faulty operation of latches and other door hardware.

2. Damage from deliberate destruction and vandalism is excluded.

3. Warranty Period for Welded Metal Lockers: Lifetime.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: For each category of metal lockers, obtain metal lockers and accessories from single source from single locker manufacturer.

1. Obtain locks from single lock manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: For lockers and locker benches indicated to be accessible, comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design", ICC A117.1, and building Code in effect for Project.

2.3 WELDED ATHLETIC LOCKERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

1. Multipoint Latching Type:

    a. DeBourgh Manufacturing Company; Core Athletic Lockers.
    b. Penco Products, Inc.; Welded Gen2.
    c. Republic Storage Systems, LLC; All-Welded Ventilated Lockers.

2. Single Point Latching Type:

    a. DeBourgh Manufacturing Company; Core Athletic Lockers.
    b. Penco Products, Inc.; Welded Gen2 Defiant II Single Point Latch (SPL).
    c. Republic Storage Systems, LLC; Single Point II Ventilated Lockers.

B. Locker Configurations and Sizes: See plans for locations:

1. Tiers: Single.

    a. Height: 72 inches.
    b. Width: 12 inches.
    c. Depth: 12 inches.

2. Tiers: Single.

    a. Height: 36 inches.
    b. Width: 12 inches.
    c. Depth: 12 inches.

3. Tiers: Single.

    a. Height: 72 inches.
    b. Width: 24 inches.
    c. Depth: 18 inches.

4. Tiers: Triple.

    a. Height: Triple Tier, each @ 24” inches.
    b. Width: 12 inches.
    c. Depth: 12 inches.

C. Perforated Doors: One piece; fabricated from 0.075-inch (14 gage) nominal-thickness steel sheet with manufacturer's standard diamond perforations; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges.

1. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners; welded to inner face of doors.

D. Body: Assembled by welding body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops and Bottoms: 0.060-inch (16 gage) nominal thickness, with single bend at edges.
2. Backs: Manufacturer's standard thickness, but not less than 0.048-inch (18 gage) nominal thickness.
3. Shelves: 0.060-inch (16 gage) nominal thickness, with double bend at front and single bend at sides and back.

E. Perforated Sides: Fabricated from 0.060-inch (16 gage) nominal-thickness steel sheet with manufacturer's standard diamond perforations.

F. Frames: Channel formed; fabricated from 0.060-inch (16 gage) nominal-thickness steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral, full-height door strikes on vertical main frames.

1. Cross Frames for between Tiered Lockers: Channel formed and fabricated from same material as main frames; welded to vertical main frames.

G. Hinges: Welded to door and attached to door frame with rivets spaced every 6 inches, or closer, that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees.

1. Continuous Hinges: Manufacturer's standard, steel; side or top mounted as required by locker configuration.

H. Recessed Door Handle and Latch: Stainless -steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant.

1. Multipoint Latching: Finger-lift latch control designed for use with built-in combination locks, built-in cylinder locks, or padlocks; positive automatic latching and prelocking.

a. Latch Hooks: Equip doors 48 inches and higher with three latch hooks and doors less than 48 inches high with two latch hooks; fabricated from manufacturer's standard thickness, but not less than 0.120-inch (11 gage) nominal-thickness steel sheet; welded to full-height door strikes; with resilient silencer on each latch hook.

b. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

I. Locks: Combination padlocks.

J. Identification Plates: Manufacturer's standard, etched, embossed, or stamped aluminum plates, with numbers and letters at least 3/8 inch high.

K. Accessible Locker Identification: Manufacturer’s standard accessibility logo decal.

L. Hooks: Manufacturer's standard ball-pointed, aluminum or steel; zinc plated.

M. Continuous Sloping Tops: Fabricated from manufacturer’s standard thickness, but not less than 0.048-inch (18 gage) nominal-thickness steel sheet, with a pitch of approximately 20 degrees.

1. Closures: Vertical-end type.

N. Filler Panels: Fabricated from manufacturer’s standard thickness, but not less than 0.048-inch (18 gage) nominal-thickness steel sheet.

O. Materials:

1. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B, suitable for exposed applications.

P. Finish: Powder coat.

1. Color: As selected by Architect from manufacturer's full range. Multiple colors may be selected.

2.4 LOCKS

A. Combination Padlock: Provided by Owner.

2.5 LOCKER BENCHES

A. Provide bench units with overall assembly height of 17-1/2 inches.

B. Bench Tops: Manufacturer's standard one-piece units, with rounded corners and edges.

1. Size: Minimum Provide 20- to 24-inch-wide tops where accessible benches are indicated.
2. Laminated clear hardwood with one coat of clear sealer on all surfaces and one coat of clear lacquer.

C. Fixed-Bench Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors.

1. Basis-of-Design Product: Subject to compliance with requirements, provide List Industries Inc.; 4810 Extra Heavy-Duty Cast Iron Pedestals, or comparable product.

2.6 FABRICATION

A. Fabricate metal lockers square, rigid, without warp, and with metal faces flat and free of dents or distortion. Make exposed metal edges safe to touch and free of sharp edges and burrs.

1. Form body panels, doors, shelves, and accessories from one-piece steel sheet unless otherwise indicated.
2. Provide fasteners, filler plates, supports, clips, and closures as required for complete installation.

B. Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.

C. Equipment: Provide each locker with an identification plate and the following equipment:

1. Single-Tier Units: Shelf, one double-prong ceiling hook, and two single-prong wall hooks.
2. Triple-Tier Units: One double-prong ceiling hook and two single-prong wall hooks.

D. Welded Construction: Factory preassemble metal lockers by welding all joints, seams, and connections; with no bolts, nuts, screws, or rivets used in assembly of main locker groups. Factory weld main locker groups into one-piece structures. Grind exposed welds smooth and flush.

E. Accessible Lockers: Fabricate as follows:

1. Locate bottom shelf no lower than 15 inches above the floor.
2. Where hooks, coat rods, or additional shelves are provided, locate no higher than 48 inches above the floor.

F. Continuous Zee Base: Fabricated in lengths as long as practical to enclose base and base ends; finished to match lockers.

G. Continuous Sloping Tops: Fabricated in lengths as long as practical, without visible fasteners at splice locations; finished to match lockers.

1. Sloping-top corner fillers, mitered.

H. Recess Trim: Fabricated with minimum 2-1/2-inch face width and in lengths as long as practical; finished to match lockers.

I. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip-joint filler angle formed to receive filler panel.

J. Boxed End Panels: Fabricated with 1-inch-wide edge dimension and designed for concealing fasteners and holes at exposed ends of nonrecessed metal lockers; finished to match lockers.

1. Provide one-piece panels for double-row (back-to-back) locker ends.

K. Finished End Panels: Fabricated to conceal unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.

1. Provide one-piece panels for double-row (back-to-back) locker ends.

2.7 ACCESSORIES

A. Fasteners: Zinc- or nickel-plated steel, slotless-type, exposed bolt heads; with self-locking nuts or lock washers for nuts on moving parts.

B. Anchors: Material, type, and size required for secure anchorage to each substrate.

1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts for corrosion resistance.
2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.8 STEEL FINISHES

A. Factory finish steel surfaces and accessories except stainless-steel and chrome-plated surfaces.

B. Powder-Coat Finish: Immediately after cleaning and pretreating, electrostatically apply manufacturer's baked-polymer, thermosetting powder finish. Comply with resin manufacturer's written instructions for application and baking.

1. Minimum Dry-Film Thickness: As recommended by manufacturer but not less than 2 mils.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine walls and floors or support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
B. Proceed with installation only after unsatisfactory conditions have been corrected.
C. Beginning installation constitutes Contractor’s acceptance of substrates and conditions.

3.2 INSTALLATION

A. Install lockers level, plumb, and true; shim as required, using concealed shims.

1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches o.c. Using concealed fasteners, install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion.

2. Anchor single rows of metal lockers to walls near top and bottom of lockers.

3. Anchor back-to-back metal lockers to floor.

B. Welded Lockers: Connect groups together with manufacturer's standard fasteners, with no exposed fasteners on face frames.

C. Equipment:

1. Attach hooks with at least two fasteners.

2. Attach door locks on doors using security-type fasteners.

3. Identification Plates: Identify metal lockers with identification indicated on Drawings.

   a. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.

4. Accessible Locker Identification: Apply accessibility logo decals where indicated on Drawings.

D. Trim: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.

1. Attach recess trim to recessed metal lockers with concealed clips.
2. Attach filler panels with concealed fasteners. Locate filler panels where indicated on Drawings.
3. Attach sloping-top units to metal lockers, with closures at exposed ends.
4. Attach finished end panels using fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.

E. Fixed Benches: Provide no fewer than four pedestals for each accessible bench, uniformly spaced not more than 72 inches apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

3.3 ADJUSTING

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.

3.4 PROTECTION

A. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.

B. Touch up marred finishes or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION 10 51 13