

SECTION 101100
VISUAL DISPLAY UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glassboards
- B. Markerboards
- C. Tackboards

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Blocking and supports.
- B. Section 092116 - Gypsum Board Assemblies: Concealed supports in metal stud walls.

1.03 REFERENCE STANDARDS

- A. ASTM A424/A424M - Standard Specification for Steel, Sheet, for Porcelain Enameling 2018.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.
- C. ASTM F793/F793M - Standard Classification of Wall Coverings by Use Characteristics 2015.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data on chalkboard, markerboard, tackboard, tackboard surface covering, trim, and accessories.
- C. Shop Drawings: Indicate wall elevations, dimensions, joint locations , special anchor details.
- D. Samples: Submit physical samples for selection of color and texture of markerboard, tackboard, tackboard surface covering, and trim.
- E. Test Reports: Show compliance to specified surface burning characteristics requirements.
- F. Manufacturer's printed installation instructions.
- G. Maintenance Data: Include data on regular cleaning, stain removal .

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year warranty for markerboard to include warranty against discoloration due to cleaning, crazing or cracking, and staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Visual Display Boards:
 - 1. Claridge Products and Equipment, Inc: www.claridgeproducts.com.
 - 2. Polyvision Corporation (Nelson Adams): www.polyvision.com.

2.02 VISUAL DISPLAY UNITS

- A. Glassboards: Glass Markerboards.
 - 1. Color: Calm White.
 - 2. Size: As indicated in section 110600 - Schedules for Equipment.
 - 3. Accessories: Provide Magnetic Slim Marker Caddy.
 - 4. Options: Provide the following options.
 - a. Magnetic.
 - b. Magnetic Eraser.
 - c. Magnetic Cleaning Cloth.
 - d. Set of dry erase markers.
 - e. Map printed on the back of the glass whiteboard where indicated in schedule 110600 - Schedules for Equipment.
 - 5. Use one of the following or any equivalent made by one of the listed manufacturers:
 - a. Claridge Glass Markerboard Invisi-Mount
- B. Markerboard: Porcelain enamel on steel, laminated to core.
 - 1. Color: White.
 - 2. Steel Face Sheet Thickness: 24 gage, 0.0239 inch .
 - 3. Core: Fiberboard, 1/2 inch thick, laminated to face sheet.

4. Size: As indicated in section 110600 - Schedules for Equipment.
 5. Frame: Extruded aluminum, with concealed fasteners.
 6. Frame Finish: Anodized, natural.
 7. Accessories: Provide Magnetic Slim Marker Caddy.
 8. Options: Provide the following options.
 - a. Magnetic Eraser.
 - b. Magnetic Cleaning Cloth.
 - c. Set of dry erase markers.
 9. Use one of the following or any equivalent made by one of the listed manufacturers:
Claridge Concept Series.
- C. Tackboards: Fabric laminated to cork.
1. Cork Thickness: 1/4 inch.
 2. Fabric: Vinyl coated fabric.
 3. Color: As selected from manufacturer's full range.
 4. Backing: Fiberboard, 1/4 inch thick, laminated to tack surface.
 5. Surface Burning Characteristics: Flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.
 6. Size: As indicated in section 110600 - Schedules for Equipment .
 7. Frame: Extruded aluminum , with concealed fasteners.
 8. Frame Finish: Anodized, natural.
 9. Use one of the following or any equivalent made by one of the listed manufacturers:
Claridge Concept Series.
- D. Combination Units and Units Made of More Than One Panel: Factory-assembled markerboards and tackboards in a single frame, of materials specified above.
1. Join panels of similar construction with butt joints, aligned and secured with steel spline concealed in edge of core.
 2. Configuration: As indicated in section 110600 - Schedules for Equipment .

2.03 MATERIALS

- A. Porcelain Enameled Steel Sheet: ASTM A424/A424M, Type I, Commercial Steel, with fired-on vitreous finish.
- B. Vinyl Coated Fabric: ASTM F793 Category VI.
- C. Adhesives: Type used by manufacturer.

2.04 ACCESSORIES

- A. Temporary Protective Cover: Sheet polyethylene, 8 mil thick.
- B. Mounting Brackets: Concealed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that internal wall blocking is ready to receive work and positioning dimensions are as indicated on shop drawings.

3.02 INSTALLATION

- A. Install boards in accordance with manufacturer's instructions.
- B. Secure units level and plumb.
- C. Butt Joints: Install with tight hairline joints.

3.03 CLEANING

- A. Clean board surfaces in accordance with manufacturer's instructions.
- B. Cover with protective cover, taped to frame.
- C. Remove temporary protective cover at Date of Substantial Completion.

END OF SECTION

SECTION 101400
SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs.
- B. Building identification signs.
- C. Plaque.

1.02 RELATED REQUIREMENTS

- A. Section 265100 - Interior Lighting: Exit signs required by code.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

1.04 ADMINISTRATIVE REQUIREMENTS

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

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Shop Drawings: Show fabrication and installation details 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 others, and accessories
 - 3. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.

- D. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
 - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
 - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
 - 3. Submit for approval by Owner through Architect prior to fabrication.
- E. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
- F. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- G. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
- H. Manufacturer's Qualification Statement.
- I. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company that is an authorized representative of the manufacturer specializing in installing the products specified in this section with minimum three years of documented experience.
- B. Single Source Limitation: Obtain each sign type indicated from one source from a single manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Pursuant to manufacturer's instructions.
- B. Package signs as required to prevent damage before installation.
- C. Package room and door signs in sequential order of installation, labeled by floor or building.
- D. Store tape adhesive at normal room temperature.
- E. Protect against moisture and damage.

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1.08 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.
- C. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit installation of signs in exterior locations. Installation to be performed according to manufacturer's written instructions and warranty requirements.
- D. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement prior to fabrication and indicate measurements on shop drawings.

1.09 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which 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 metal or polymer finishes beyond normal weathering.
 - 2. Warranty Period:
 - a. Interior Signage: Five years from date of Substantial Completion.
 - b. Dimensional Letter Signs: Full lifetime warranty.
 - c. Plaques: Full lifetime warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Flat Signs:
 - 1. ASI Sign Systems, Inc.: www.asisignage.com
 - 2. Best Sign Systems, Inc: www.bestsigns.com/#sle.
 - 3. Cosco Industries (ADA signs); ADA Series 1: www.coscoarchitecturalsigns.com/#sle.
 - 4. Inpro; Aspen produced in one piece photopolymer media: www.inprocorp.com/#sle.
 - 5. Mohawk Sign Systems, Inc: www.mohawksign.com/#sle.
 - 6. The Southwell Co.: www.southwellco.com.

7. Substitutions: See Section 016000 - Product Requirements.

B. Dimensional Letter Signs:

1. ASI Sign Systems, Inc.: www.asisignage.com
2. Cosco Industries; Cast Aluminum: www.coscoarchitecturalsigns.com/#sle.
3. Inpro; S600-060: www.inprocorp.com/#sle.
4. Gemini Inc.: www.signletters.com
5. Substitutions: See Section 016000 - Product Requirements.

C. Plaques:

1. ASI Sign Systems, Inc.: www.asisignage.com
2. Cosco Industries: www.coscoarchitecturalsigns.com.
3. Substitutions: See Section 016000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Thermal Movements for Exterior Signage: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg. F, ambient; 180 deg F, material surfaces.

2.03 SIGNAGE APPLICATIONS

A. Accessibility Compliance: Signs are required to comply with ADA Standards, ANSI/ICC A117.1, and applicable local codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

B. Room and Door Signs: Provide a sign for every room at every doorway into the room, whether it has a door or not, not including corridors, lobbies, and similar open areas.

1. Sign Type: Flat signs with sand-carved panel media as specified.
2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
 - a. Separate Braille 1/2 inch from the corresponding raised characters. Braille translations to be provided by signage manufacturer.
 - b. Glue-on letters or etched backgrounds are not acceptable.
3. Character Proportion: Width to height ratio between 3:5 and 1:1, and stroke-width-to-height ration between 1:5 and 1:10.
4. Room Number Character Height: 1 inch.

5. Room Letters Character Height: 3/4 inch, minimum.
6. Symbol Size: 4 inches.
7. Sign Size: 2 inches x length required or 6 inches by 6 inches, unless otherwise indicated.
 - a. Toilet Room Sign Size: Design ADA-4 size 8 inch by 8 inch with 4 inch accessibility symbol.
8. Office Doors: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section for replaceable occupant name.
9. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.
10. Service Rooms: Identify with room names and numbers to be determined later, not those indicated on drawings.
11. EXIT Sign Type: Identify with ISA (International Symbol of Accessibility) pictogram, the text "EXIT", and braille.
12. NO EXIT Sign Type: Identify with the text "NO EXIT - DOOR IS LOCKED", and braille.
13. TOILET ROOM Sign Type: Identify with pictograms, the names "MEN", "WOMEN", and "UNISEX", the ISA (International Symbol of Accessibility) pictogram, and braille.

C. Plaque:

1. Provide castings free from pits, scale, sand holes, and other defects.
2. Mount on interior wall in location to be determined by Architect.
3. For all exterior building plaques, see Division 04 Masonry Section.

2.04 SIGN TYPES

A. Flat Signs: Signage media without frame.

1. Edges: Square.
2. Corners: Square.
3. Wall Mounting of One-Sided Signs: Tape adhesive.

B. Color and Font: Unless otherwise indicated:

1. Character Font: Gill Sans.

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2. Character Case: Upper case only.
3. Copy Position: CC (centered/centered), unless otherwise indicated.
4. Background Color: As scheduled from Manufacturer's full range.
5. Character Color: Contrasting color.
6. Character and Background Finish: Non-glare.

2.05 TACTILE SIGNAGE MEDIA

- A. Sand-Carved Panels: Melamine, laminated colored plastic with contrasting core color; sand-blasted through face, removing background material, raising the characters to specified height.
 1. Product: [Mohawk Sign Systems, Inc. "Graphic Process Series 200A: Sand-Carved" using Format D].
 2. Total Thickness: 1/8 inch.
 3. Melamine Plastic Laminate: non-static, fire-retardant and self-extinguishing; impervious to most acids, alkalies, alcohol, solvents, abrasives and boiling water.

2.06 PLAQUES

- A. Metal Plaques:
 1. Metal: Aluminum casting.
 2. Metal Thickness: 1/8 inch, minimum.
 3. Size: 24 inches by 36 inches.
 4. Copy:
 - a. Name of Client or Fire District.
 - b. Mitchell Associates Architects.
 - c. Other individuals to be selected by Owner.
 - d. Year of construction completion.
 5. Background Texture: Leatherette Finish.
 6. Border Style: Plain bevel.
 7. Mounting: Concealed fasteners, matching plaque finish; manufacturer's standard fastening methods for concealed mounting recommended in writing by manufacturer for type of substrate indicated.

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2.07 DIMENSIONAL LETTERS

A. Metal Letters:

1. Metal: Aluminum casting.
2. Thickness: 1 inch
3. Finish: Anodized.
4. Texture and Color: As selected by Architect from manufacturer's full range.
5. Height: As indicated on the drawings.
6. Font: Times Bold
7. Mounting: Concealed anchors and inserts, projected spacer style mounting.

2.08 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Tape Adhesive: Double sided tape, permanent adhesive.
- C. Anchors and Inserts: Nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance.
 1. Drilled-in-Place Anchors: Toothed steel or lead expansion bolt devices.
- D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.09 FINISHES, GENERAL

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

2.10 ALUMINUM FINISHES

- A. Color Anodic Finish: Manufacturer's standard Class 1 integrally colored or electrolytically deposited color anodic coating, 0.018 mm or thicker, in color as selected applied over a satin (directionally textured) mechanical finish, complying with AAMA 611.

2.11 COPPER-ALLOY FINISHES

- A. Cast-Bronze Plaque Finishes: Exposed surfaces free from porosity, burrs, and rough spots; with returns finished with fine-grain air blast.

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1. Raised Areas: Hand-tool and buff borders and raised copy to produce manufacturer's standard satin finish.
 2. Background Finish: Dark oxidized.
- B. Clear Protective Coating: Coat exposed surfaces of copper alloys with manufacturer's standard clear organic coating specially designed for coating copper-alloy products.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Proceeding with installation confirms Contractor's acceptance of substrate and conditions.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Install free from distortion, warp, or defect adversely affecting appearance.
- D. Locate signs where indicated:
 1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at 60 inches above finished floor and at 9 inches from the arc of the door swing in the closed position.
 - a. At double door locations, locate on wall to the right of the right-hand door.
 - b. If no wall space is available at latch side of door, locate on the nearest adjacent wall.
 2. If no location is indicated obtain Architect's instructions.
 3. Verify all mounting locations with Architect prior to starting work.
- E. 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.

3.03 CLEANING

- A. Clean installed products in accordance with manufacturer's instructions prior to Substantial Completion.

3.04 PROTECTION

- A. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

END OF SECTION

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SECTION 102113.19
PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solid plastic toilet compartments.
- B. Urinal screens.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Blocking and supports.
- B. Section 092116 - Gypsum Board Assemblies
- C. Section 102800 - Toilet, Bath, and Laundry Accessories.

1.03 REFERENCE STANDARDS

- A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.
- B. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth 2019.
- C. CID-A-A-60003, Commercial Item Description - Partitions, Toilets, Complete; 1997.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the work with placement of support framing and anchors in walls and ceilings.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.
- C. Verification Samples: Submit two samples of partition panels, 6 x 6 inch in size illustrating panel finish, color, and sheen.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Warranty: Sample of Special Warranty.

1.06 QUALITY ASSURANCE

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

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1.07 FIELD CONDITIONS

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

1.08 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of toilet partitions that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Breakage, corrosion, delamination and defects in factory workmanship.
 - 2. Warranty Period: Ten years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Solid Plastic Toilet Compartments:
 - 1. Global Partitions: www.globalpartitions.com.
 - 2. Scranton Products (Santana/Comtec/Capital): www.scrantonproducts.com.

2.02 SOLID PLASTIC TOILET COMPARTMENTS

- A. Solid Plastic Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with NFPA 286; floor-mounted unbraced.
- B. Doors:
 - 1. Thickness: 1 inch.
 - 2. Width: 24 inch.
 - 3. Width for Handicapped Use: 36 inch, out-swinging.
 - 4. Height: 55 inch.
- C. Panels:
 - 1. Thickness: 1 inch.
 - 2. Height: 55 inch.
- D. Pilasters:

1. Thickness: 1 inch.
2. Width: As required to fit space; minimum 3 inch.

2.03 COMPONENTS

- A. Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), floor-mounted headrail-braced.
 1. Color: Single color as selected from manufacturer's full range.
- B. Door and Panel Dimensions:
 1. Thickness: 1 inch.
 2. Door Width: 24 inch.
 3. Door Width for Handicapped Use: 36 inch .
 4. Height: 55 inch.
 5. Thickness of Pilasters: 1 inch.
- C. Urinal Screens: Wall mounted with continuous panel brackets.

2.04 ACCESSORIES

- A. Pilaster Shoes: Formed ASTM A666, Type 304 stainless steel with satin finish, 3 in high, concealing floor fastenings.
 1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster.
- B. Head Rails: Hollow anodized aluminum tube, 1 x 1-5/8 inch size, with anti-grip strips and cast socket wall brackets.
- C. Pilaster Brackets: Satin stainless steel.
- D. Wall Brackets: Continuous type, satin stainless steel.
- E. Attachments, Screws, and Bolts: Stainless steel , tamper proof type.
 1. For attaching panels and pilasters to brackets: Through-bolts and nuts ; tamper proof.
 2. For concealed anchorage applications, provide hot-dip galvanized or other rust-resistant, protective-coated steel.
 3. Hinges: Manufacturer's minimum 0.062 inch (1.59 mm) thick stainless steel paired self closing type or continuous, cam type that swings to a closed position at compartments designated to be accessible or partially open position at all other compartments, allowing emergency access by lifting door.

4. Door Latch: Manufacturer's heavy duty surface mounted cast-stainless-steel latch unit designed to resist damage due to slamming. Slide type with exterior emergency access feature.
5. Door Strike and Keeper: Manufacturer's heavy duty surface mounted cast-stainless-steel rubber faced strike and keeper; mounted on pilaster in alignment with door latch. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
6. Coat Hook: Manufacturer's heavy-duty combination cast-stainless-steel hook and rubber tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount on door.
7. Door Bumper: Manufacturer's heavy-duty rubber-tipped cast-stainless-steel bumper at out-swinging doors and entrance-screen doors.
8. Door Pull: Manufacturer's heavy-duty cast-stainless-steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify correct spacing of and between plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
 1. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
 2. Align brackets at pilasters with brackets at walls.
- D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.
- E. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation From Plumb: 1/8 inch.

3.04 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.
- C. Adjust adjacent components for consistency of line or plane.

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SECTION 102800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Accessories for toilet rooms, showers, utility rooms, and custodial rooms.
- C. Electric hand/hair dryers.
- D. Diaper changing stations.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Concealed supports for accessories, including in wall framing and plates.
- B. Section 088300 - Mirrors: Other mirrors.
- C. Section 093000 - Tiling: Ceramic washroom accessories.
- D. Section 102113.19 - Plastic Toilet Compartments.
- E. Section 224000 - Plumbing Fixtures: Under-lavatory pipe and supply covers.

1.03 ABBREVIATIONS AND ACRONYMS

- A. PPE: Personal Protective Equipment.

1.04 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. ICC/ANSI 117.1 Accessible and Usable Buildings and Facilities.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products 2017.
- D. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service 2015a (Reapproved 2019).
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- F. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.

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- G. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium 2017.
- H. ASTM C1036 - Standard Specification for Flat Glass 2016.
- I. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror 2018.
- J. ASTM F2285 - Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use 2004, with Editorial Revision (2016).

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.06 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 - 1. Identify locations using room designations indicated on Drawings.
 - 2. Identify products using designations indicated on Drawings.
- D. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.
- E. Warranty: Sample of special warranty.

1.07 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.
- B. Warranty Period: 15 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Products listed are made by Bobrick Washroom Equipment, Inc., unless otherwise indicated: www.bobrick.com.
- B. Commercial Toilet, Shower, and Bath Accessories:
 - 1. ASI - American Specialties, Inc: www.americanspecialties.com.
 - 2. Bradley Corporation: www.bradleycorp.com.
 - 3. Substitutions: Section 016000 - Product Requirements.
- C. Electric Hand Dryers:
 - 1. American Specialties, Inc.: www.americanspecialties.com.
- D. Diaper Changing Stations:
 - 1. Koala Kare Products: www.koalabear.com/#sle.
- E. Provide products of each category type by single manufacturer.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Grind welded joints smooth.
 - 2. Fabricate units made of metal sheet of seamless sheets with flat surfaces.
- B. Keys: Provide 2 keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666, Type 304.
- D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- E. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- F. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- G. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.
- H. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.
- C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.
- D. Galvanizing for Items Other than Sheet: Comply with ASTM A123/A123M; galvanize ferrous metal and fastening devices.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser (T7) : Double roll, surface mounted bracket type, chrome-plated zinc alloy brackets, eccentric-shaped plastic spindle for 1/2 revolution delivery designed to prevent theft of tissue roll.
- B. Electric Hand Dryers(T24):
 - 1. Cover: ABS plastic with silver ions (satin look).
 - 2. Color: As selected by Architect from full range of manufacturer's standard colors.
 - 3. Products:
 - a. American Specialties, Inc.; TRI-Umph High Speed Hand Dryer:
www.americanspecialties.com.
- C. Combination Towel Dispenser/Waste Receptacle(T27) : Recessed-mounted, stainless steel; seamless wall flanges, continuous piano hinges, tumbler locks on upper and lower doors.
 - 1. Waste receptacle liner: Reusable, heavy-duty vinyl.
 - 2. Towel dispenser capacity: 400 C-fold.
 - 3. Waste receptacle capacity: 18 gallons.
 - 4. Power Supply: 6 volt DC power supply.
 - 5. Dispenser: Touch-Free, Pull Towel Dispenser Module.
 - 6. Product: B-3974 manufactured by Bobrick.
- D. Soap Dispenser(T25) : Liquid soap dispenser, wall-mounted, surface, vandal-resistant, with stainless steel cover and vertical stainless steel tank and working parts; battery operated automatic dispenser, check valve, and window gage refill indicator, tumbler lock.
 - 1. Minimum Capacity: 30 ounce.
- E. Mirrors(T26) : Stainless steel framed, 1/4 inch thick tempered glass mirror.

1. Size: 24 inch wide by 36 inch high..
 2. Frame: angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; bright annealed.
 3. Backing: Full-mirror sized, minimum 0.03 inch galvanized steel sheet and nonabsorptive filler material.
 4. Product: B-2908 manufactured by Bobrick.
- F. Grab Bars: Stainless steel, nonslip grasping surface finish.
1. Heavy Duty Grab Bars(T12, T13 & T14): Floor supports are not acceptable.
 - a. Push/Pull Point Load: 900 pound-force, minimum
 - b. Dimensions: 1-1/2 inch outside diameter, minimum .05 inch wall thickness, concealed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
 - d. Products:
 - 1) B-6806.99 Series manufactured by Bobrick.
- G. Sanitary Napkin Disposal Unit (T8): Stainless steel, surface-mounted, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
- H. Diaper Changing Station (T20): Wall-mounted folding diaper changing station for use in commercial toilet facilities, meeting or exceeding ASTM F2285.
1. Manufacturers:
 - a. Koala Kare Products; Product "KB10-SSWM" : www.koalabear.com.

2.05 SHOWER ACCESSORIES

- A. Shower Curtain Rod (T47): **Stainless steel tube, 1-1/4 inch outside diameter, 0.05 inch wall thickness, satin-finished, with 3 inch outside diameter, minimum 0.04 inch thick satin-finished stainless steel flanges, for installation with exposed fasteners.**
- B. Shower Curtain (T47):
1. Material: Opaque vinyl, 0.008 inch thick, matte finish, with antibacterial treatment, flameproof and stain-resistant.
 2. Width: Equal to track length from which curtain is hung plus 10 percent added fullness, but not less than 12 inches added fullness; hemmed edges.

3. Length: Equal to floor-to-rod height, and minus 1 inch clearance above the finished floor; hemmed edges.
 4. Grommets: Corrosion-resistant metal; pierced through top hem on 6 inch centers.
 5. Color: As selected from manufacturer's full range.
 6. Shower curtain hooks: Chrome-plated or stainless steel spring wire designed for snap closure; sized to accommodate specified curtain rod. Provide one hook per curtain grommet.
 7. Open Mesh Top: No. 50 nylon mesh, minimum 20 inch high.
- C. Folding Shower Seat(T40): Wall-mounted surface; seat frame, structural support members, hinges and mechanical fasteners of Type 304 stainless steel, L-shaped, reversible seat.
1. Seat: Phenolic or polymeric composite one-piece seat or seat slats, of ivory color.
 2. Size: ADA Standards compliant.
- D. Grab Bars(T41): Stainless steel, nonslip grasping surface finish.
1. Push/Pull Point Load: 1000 pound-force, minimum.
 2. Dimensions: 1-1/2 inch outside diameter, minimum 0.125 inch wall thickness, concealed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 3. Length and Configuration:
 - a. As indicated on the Drawings.
 - 1) B-6806.99 Series manufactured by Bobrick.
- E. Towel Bar(T45): Stainless steel Type 304, 1 inch round tubular bar; round brackets, concealed attachment, satin finish.
1. Length: 24 inches.
- F. Robe Hook (T46): Heavy-duty stainless steel, single-prong, rectangular-shaped bracket and backplate for concealed attachment, satin finish.
- G. Accessible Floor Mounted Bench (T61): Clear Lacquered Maple Hardwood 1 1/4" inch thick bench on HD 8" diameter steel pedestals, color gray.
1. Size: 20 inch x 42 inch, 18 inches high.
 2. Product: Penco ADA Locker Room Bench manufactured by Penco.

2.06 CUSTODIAL ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder(T83): 18 gauge stainless steel, Type 304 unit.
 - 1. Hooks: 4, 14 gauge stainless steel rag hooks at shelf front.
 - 2. Mop/broom holders: Three spring-loaded rubber cam holders at shelf front.
 - 3. Length: Manufacturer's standard length for number of holders/hooks.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.
- C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.
- D. Verify that field measurements are as indicated on product data.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.
 - 1. Grab Bars: As indicated on drawings.
 - 2. Mirrors: As indicated on the drawings, measured to bottom of mirrored surface.
 - 3. Other Accessories: As indicated on drawings.

3.04 ADJUSTING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

3.05 CLEANING

- A. Remove temporary labels and protective coatings.
- B. Clean and polish exposed surfaces according to manufacturer's recommendatuions.

3.06 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

SECTION 102815
INTERIOR TRENCH DRAINS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following sanitary drainage piping specialties:
 - 1. Channel Drainage System.
- B. Related Sections include the following:
 - 1. Division 22 Section "Facility Storm Drainage Piping" for piping connected to trench drains.

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, and accessories for the following as well as cross-section shop drawing:
 - 1. Channel Drainage System.
- B. Operation and Maintenance Data: For drainage piping specialties to include in emergency, operation, and maintenance manuals.

1.04 QUALITY ASSURANCE

- A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.
- B. Comply with NSF 14, "Plastics Piping Components and Related Materials," for plastic sanitary piping specialty components.

1.05 COORDINATION

- A. Coordinate placement of trench drains with finished concrete surface.
- B. The placement of the interior trench drains shall be integrated with the placing of the concrete slabs surrounding them.

PART 2 PRODUCTS

2.01 CHANNEL DRAINAGE SYSTEMS

- A. Polymer-Concrete Channel Drainage Systems:

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1. Basis-of-Design Product: Subject to compliance with requirements, ACO KS100 Drain, by ACO Polymer Products, Inc. or a comparable product as approved by Architect
2. Type: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
 - a. Channel Sections: Narrow, interlocking-joint, sloped-invert, polymer-concrete modular units with end caps. Include rounded bottom, with built-in invert slope of 0.6 percent and with outlets in number, sizes, and locations indicated. Include extension sections necessary for required depth.
 - 1) Dimensions: 4-inch (102-mm) inside width. Include number of units required to form total lengths indicated.
 - 2) Frame: Stainless steel for grates.
 - b. Grates: Manufacturer's designation "heavy duty," with slots or perforations and of width and thickness that fit recesses in channel sections.
 - 1) Material: Ductile iron.
 - 2) Locking Mechanism: 'QuickLok' locking.
 - 3) ADA compliant model 478Q.
 - c. Supports, Anchors, and Setting Devices: Manufacturer's standard, unless otherwise indicated.
 - d. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.
- B. Polymer-Concrete Sediment Interceptor: Type K1-901S In-line Catch Basin by ACO Polymer Products, Inc.
 1. Description: 10-inch- (255.4-mm-) by 19.69-inch (500-mm), precast, polymer-concrete body, with outlets in number and sizes indicated. Include ductile iron slotted grate.
 2. Provide removable trash bucket.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Refer to Division 22 Section "Common Work Results for Plumbing" for piping joining materials, joint construction, and basic installation requirements.
- B. Install trench drains at low points of surface areas to be drained. Set grates of drains flush with finished surface, unless otherwise indicated.

- C. Assemble channel drainage system components according to manufacturer's written instructions. Install on support devices so that top will be flush with adjacent surface.
- D. Setting channel drainage system:
 1. Start with outlet point. Ensure string-line, or laser is set at top edge of required channel height.
 2. Set catch basin (or outlet channel) on bed of concrete to height indicated on drawings. Connect and seal outlet pipe.
 3. Using stiff/dry mix concrete, create 'patties' at intervals to support channels. Allow two patties per channel, spaced such that no concrete material is trapped in the joint, creating gaps. Note: Patties should be sized to provide required concrete surround.
 4. To seal channels, roughen ends and use a flexible sealant – check chemical compatibility.
 5. Lower channel vertically onto 'patties' and position to correct height and alignment ensuring 'tight' connection to previous channel.
 6. Add concrete on top of 'patty' to cover concrete 'keys' on side of channel - this prevents movement, or floating, during concrete pour.
 7. Continue to lay channels until end of run or next catch basin is reached.
- E. Installation tolerances
 1. Horizontal and vertical: plus or minus 1/8" in 10 ft.

3.02 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

3.03 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.
- C. Do not install grates until time of construction work completion in Apparatus Bay. Contractor to use 3/4" thick bridging material adequate to support all construction activities until finished grates are installed. Bridging material shall be tight to both sides of the trench.

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END OF SECTION

SECTION 104400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire extinguishers.
- B. Fire extinguisher cabinets.
- C. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Wood blocking product and execution requirements.

1.03 REFERENCE STANDARDS

- A. FM (AG) - FM Approval Guide current edition.
- B. NFPA 10 - Standard for Portable Fire Extinguishers 2017, with Errata (2018).
- C. UL (DIR) - Online Certifications Directory Current Edition.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.
- C. Product Data: Provide extinguisher operational features, color and finish, anchorage details, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style .
- D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.
- G. Warranty: Sample of special warranty.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate size of fire extinguisher cabinets and brackets to ensure that type and capacity of fire extinguishers indicated are accommodated.

2. Coordinate sizes and locations of fire protection cabinets with wall depths.
- B. Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to fire protection specialties including, but not limited to, schedule and coordination requirements.

1.06 FIELD CONDITIONS

- A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Failure of hydrostatic test according to NFPA 10.
 - b. Faulty operation of valves or release levers.
 2. Warranty Period: Six years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fire Extinguishers:
 1. JL Industries, Inc: www.jlindustries.com.
 2. Larsen's Manufacturing Co: www.larsensmfg.com.
 3. Potter-Roemer: www.potterroemer.com.
 4. Substitutions: See Section 016000 - Product Requirements.

2.02 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
 1. Provide extinguishers labeled by UL (DIR) or FM (AG) for purpose specified and as indicated.
- B. Multipurpose Dry Chemical Type Fire Extinguishers, Type FE-1: Carbon steel tank, with pressure gage.
 1. Stored Pressure Operated: Deep Drawn.

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2. Class: A:B:C type.
 3. Size: 5 pound, 10 pound
 - a. 5 pound in all FEC's
 - b. **10 pound** at all Apparatus Bay and Mezzanine locations.
 - c. 5 pound at all other locations.
 4. Size and classification as scheduled.
 5. Finish: Baked polyester powder coat red color.
 6. Provide at all FEC-1 and FEC-2 cabinets (as applicable per Drawings), and all FE-1 mounting bracket locations.
 7. Product: Larsen's Manufacturing Company; Model MP5.
- C. Carbon Dioxide Type Fire Extinguishers, Type FE-2: Carbon steel tank, with pressure gage.
1. Stored Pressure Operated: Deep Drawn.
 2. Class: 10-B:C.
 3. Size: 10 pound.
 4. Size and classification as scheduled.
 5. Finish: Baked polyester powder coat, red color.
 6. Provide at all FE-2 mounting bracket locations.
 7. Product: Larsen's Manufacturing Company; Model CD10.
- D. Dry Chemical Type Fire Extinguishers, Type FE-3: Stainless steel tank, with pressure gauge.
1. Class: K type.
 2. Size: 1.6 gallons.
 3. Provide at all FE-3 mounting bracket locations.
 4. Finish: Polished stainless steel.
 5. Temperature range: Minus 20 degrees F to 120 degrees F.

2.03 FIRE EXTINGUISHER CABINETS, TYPE FEC-1

- A. Cabinet Metal: Formed stainless steel sheet; 0.036 inch thick base metal.
- B. Cabinet Configuration: Semi-recessed type.

1. Size to accommodate accessories.
 2. Exterior nominal dimensions of 13 inch wide by 27 inch high by 5 inch deep.
 3. Trim: Rolled edge, returned to wall surface, with 2-1/2 inch projection, 1-1/2 inch wide face.
 4. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim and door stiles.
- C. Door: 1/2 inch thick, reinforced for flatness and rigidity; projected lever handle with cam-action latch. Hinge doors for 180 degree opening with continuous piano hinge. Provide roller type catch.
- D. Door Glazing: Tempered glass, clear, 1/8 inch thick, and set in resilient channel glazing gasket.
- E. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.
- F. Fabrication: Weld, fill, and grind components smooth.
- G. Finish of Cabinet Exterior Trim and Door: Stainless Steel, No. 4.
- H. Finish of Cabinet Interior: White colored enamel.
- I. Product: Larsen's Manufacturing Company; Architectural Series Model No. SS-2409-R3

2.04 FIRE-RATED FIRE EXTINGUISHER CABINETS, TYPE FEC-2

- A. Cabinet Metal: Formed stainless steel sheet; 0.048 inch thick base metal.
- B. Cabinet Configuration: Semi-recessed type.
1. Double wall construction fabricated from cabinet metal lined with minimum 5/8 inch thick fire-barrier material.
 2. Sized to accommodate accessories.
 3. Exterior nominal dimensions of 13 inch wide x 27 inch high x 5 inch deep.
 4. Trim: Rolled edge, returned to wall surface, with 2-1/2 inch projection, 1-1/2 inch wide face.
 5. Form cabinet enclosure with right angle inside corners and seams. Form perimeter trim and door stiles.
- C. Door: 1/2 inch thick, reinforced for flatness and rigidity; fully glazed panel with frame; tubular stiles and rails, hollow-metal design; projected lever handle with cam-action latch. Hinge doors for 180 degree opening with continuous piano hinge. Provide roller type catch.

- D. Door Glazing: Glass, clear, 1/8 inch thick tempered. Set in resilient channel gasket glazing.
- E. Cabinet Mounting Hardware: Appropriate to cabinet. Pre-drill for anchors.
- F. Weld, fill, and grind components smooth.
- G. Finish of Cabinet Exterior Trim and Door: Stainless Steel, No. 4.
- H. Finish of Cabinet Interior: White enamel.
- I. Product: Larsen's Manufacturing Company; Architectural Series Model No. FS-SS-2409-R3

2.05 ACCESSORIES

- A. Graphic Identification: FIRE EXTINGUISHER; silk-screened application applied to cabinet door in a vertical orientation; Color: Red.
- B. Signage: V-Shaped Sign - Larsen Model PTD-182 or approved equal
 - 1. Provide at every location of bracket mounted extinguishers and FEC's. Mount at 7'-0" AFF as measured from centerline of sign.

2.06 MOUNTING BRACKETS, TYPE FE-1 & FE-2

- A. Where indicated, provide extinguisher brackets, designed to secure fire extinguishers to wall or structure. Provide blocking as required for all stud wall construction.
- B. Extinguisher Brackets: Formed steel, galvanized and enamel finished. Sizes as required for types and capacities of fire extinguishers specified. Appropriate design for cabinet or structure mounting application.
- C. Finish Color: Red.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify rough openings for cabinet are correctly sized and located.
- C. Examine fire extinguishers for proper charging and tagging. Remove and replace damaged, defective, or uncharged fire extinguishers.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install cabinets plumb and level in wall openings, 48 inches from finished floor to top of cabinet.

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- C. Install mounting brackets plumb and level to surfaces, 48 inches from finished floor to top of fire extinguisher.
- D. Secure rigidly in place.
- E. Place extinguishers in cabinets.
- F. Position graphic identification at locations indicated.
- G. Position signage at all locations for all types of extinguishers.
- H. Remove temporary protective coverings and strippable films, if any, as fire protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.

3.03 ADJUSTING

- A. Adjust cabinet doors to operate easily without binding.
- B. Verify that integral locking devices operate properly.

3.04 CLEANING

- A. Clean interior and exterior cabinet surfaces in accordance with manufacturer's instructions.

3.05 PROTECTION

- A. Touch up marred finishes. Use only materials and procedures recommended or furnished by the manufacturers.
- B. Replace cabinets and mounting brackets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

3.06 SCHEDULES

- A. See Architectural Floor Plan(s) for quantities, types and locations.

END OF SECTION

SECTION 105129
PHENOLIC LOCKERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Phenolic lockers.
- B. Locker benches.

1.02 RELATED REQUIREMENTS

- A. Section 061010 - Rough Carpentry: Wood blocking and nailers.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Conference: Conduct at Project site.
- B. Coordination: Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that phenolic lockers can be supported and installed as indicated.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's published data on locker construction, sizes and accessories.
- C. Shop Drawings: Indicate locker plan layout, elevations, sections, details, locker trim, locker accessories, numbering plan, and attachments to other work.
- D. Samples: Submit two samples 4 by 4 inches in size, of each color scheduled.
- E. Manufacturer's Installation Instructions: Indicate component installation assembly.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

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1. See Section {CH#10005796} - Product Requirements, for additional provisions.
2. Identification Plates: Full size; equal to 10 percent of amount installed.
3. Hooks: Full size; equal to 10 percent of amount installed.

G. Warranty: Sample of special warranty.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of documented experience and approved by manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver lockers until spaces to receive them are clean, dry, and ready for installation.
- B. Protect locker finish and adjacent surfaces from damage.

1.08 WARRANTY

- A. See Section {CH#10005804} - Closeout Submittals, for additional warranty requirements.
- B. Provide ten year manufacturer warranty covering defects of manufacturing and workmanship, including, but not limited to, structural failures, faulty latch operation, and other door hardware.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Phenolic Lockers:
 1. ASI Storage Solutions: www.asistorage.com.
 2. Columbia Lockers, a division of PSiSC; Phenolic Lockers: www.psis.com/#sle.
 3. Summit Lockers: www.summitlockers.com
 4. Scranton Products (Santana/Comtec/Capital); Product "Tufftec Lockers": www.scrantonproducts.com.
 5. Substitutions: See Section 016000 - Product Requirements.

2.02 LOCKER APPLICATIONS

- A. Wardrobe Lockers: Phenolic lockers, wall mounted with matching closed base.
 1. Width: 18 inches.

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2. Depth: 24 inches.
 3. Height: 72 inches.
 4. Locker Configuration: Single tier.
 5. Fittings: Hat shelf, one double-prong ceiling hook, two single prong wall hooks.
 6. Locking: Padlock hasps, for padlocks provided by Owner.
 7. Provide flat top.
 8. Color: As selected by Architect from manufacturer's full line of standard colors.
- B. Athletic Lockers: Two tier lockers, wall mounted with matching closed base.
1. Width: 12 inches.
 2. Depth: 12 inches.
 3. Height: 36 inches.
 4. Fittings: One double-prong ceiling hook, two single prong wall hooks.
 5. Locking: Padlock hasps, for padlocks provided by Owner.
 6. Provide flat top.
 7. Color: As selected by Architect from manufacturer's full line of standard colors.
- C. Locker Benches: Stationary type; bench top of 1 1/2" thick, solid HDPE plastic.
1. Accessibility: Comply with ICC A117.1 and ADA Standards.
 2. Height: 18 inch.
 3. Length: 42 inch.
 4. Depth: 20 inches.
 5. Pedittals: 1 1/4" diameter painted steel pedestals, 16 1/4" high, secured to bench tops with stainless steel tamper resistant torx head screws and secured to the floor using lead expansion shields with 2" stainless steel Phillips head machine bolts.
 6. Color: As selected by Architect from manufacturer's full line of standard colors.

2.03 PHENOLIC LOCKERS

- A. Lockers: Factory assembled, made of phenolic core panels with mortise and tenon joints and stainless steel mechanical joint fasteners; fully finished inside and out; each locker capable of standing alone.

1. Doors: Full overlay, covering full width and height of locker body; square edges.
 2. Panel Core Exposed at Edges: Machine polished, without chips or tool marks; square edge unless otherwise indicated.
 3. Where locker ends or sides are exposed, finish the same as fronts or provide extra panels to match fronts.
 4. Provide filler strips where indicated, securely attached to lockers.
 5. Door Color: As selected by Architect; allow for 2 different colors.
 6. Body Color: Manufacturer's standard white or light color.
 7. Fasteners for Accessories and Locking Mechanisms: Tamperproof type.
- B. Component Thicknesses:
1. Doors: 1/2 inch minimum thickness.
 2. Locker Body: One of the following combinations:
 - a. Tops, bottoms, and shelves 3/8 inch; sides and backs 5/16 inch; minimum.
 3. End Panels and Filler Panels: 3/8 inch minimum thickness.
 4. Sloped Tops: 1/2 inch minimum thickness.
 5. Toe Kick Plates: 1/2 inch minimum thickness.
- C. Phenolic Core Panels: Nonporous phenolic resin and paper core formed under high pressure, with natural colored finished edges, integral melamine surface, matte finish, and uniform surface appearance; glued laminated panels not acceptable.
1. Surface Burning Characteristics: Flame spread index of 75 or less, and smoke developed index of 450 or less; when tested in accordance with ASTM E84.
- D. Hinges: Stainless steel or Heavy duty extruded aluminum, powder coated to match locker color; minimum of 90 degree opening; continuous with sex bolts.
- E. Coat Hooks: Ball-pointed type, high-impact phenolic; attached with tamperproof screws; two fasteners minimum per each.
- F. Number Plates: Manufacturer's standard, minimum 4-digit, permanently attached with two rivets minimum; near top of door and centered; may be field installed.
- G. Locks: Locker manufacturer's digital type with keypad.
- H. Locker Legs: Manufacturer's standard adjustable support and leveling leg, minimum 1 inch adjustment; with hardware for attaching toe kick plates.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that prepared bases are in correct position and configuration.
- B. Verify bases and embedded anchors are properly sized.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install lockers plumb and square.
- C. Secure lockers with anchor devices to suit substrate materials. Minimum Pullout Force: 100 pounds.
- D. Bolt adjoining locker units together to provide rigid installation.
- E. Install end panels, filler panels, sloped tops, and miscellaneous panels.
- F. Install accessories.
- G. Replace components that do not operate smoothly.

3.03 ADJUSTING

- A. Lubricate and adjust hardware.
- B. Adjust doors and latches to operate easily without binding.

3.04 CLEANING

- A. Clean locker interiors and exterior surfaces.

3.05 PROTECTION

- A. Protect lockers from damage, abuse, dust, dirt, stain, or paint.
- B. Do not permit use during construction.
- C. Touch up marred finishes using only materials and procedures recommended or furnished by locker manufacturer. Replace lockers that cannot be restored to factory-finished appearance.

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END OF SECTION

**SECTION 105713
HAT AND COAT RACKS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shelf standards, brackets, and accessories.
- B. See drawings for locations and configurations.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Wood blocking in walls for attachment of standards.
- B. Section 092116 - Gypsum Board Assemblies: Blocking in metal stud walls for attachment of standards.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
- C. Selection Samples: For each finish product specified, two complete sets of actual material samples representing manufacturer's full range of available colors and patterns.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store products under cover and elevated above grade.
- B. Store products in manufacturer's unopened packaging until ready for installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. EMCO Specialty Products, Inc., Kansas City, KS; www.emcospi.com
- B. Wall Mounted Coat Rack: R1 Hanger Shelf in Coat Room.

2.02 MATERIALS

- A. Wall strips to be 1/2" extruded aluminum 12" long, powder coated black.

- B. Brackets to be solid cast aluminum powder coated black. Bracket screws shall be included to allow for height adjustment.
- C. Shelf slat is extruded aluminum: finish silver.
- D. Hanger bar shall be 1" black aluminum tube capped at each end.
- E. Accessories: EMCO hangers: No. 11 hanger with open hook shall be spaced 4 per foot.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Mount standards to solid backing capable of supporting intended loads.
- C. Install brackets, shelving, and accessories.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 107316.13
STAINLESS STEEL CANOPIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Stainless steel canopies.

1.02 REFERENCE STANDARDS

- A. ASTM A276 - Standard Specification for Stainless Steel Bars and Shapes; 2010.
- B. ASTM A554 - Standard Specification for Welded Stainless Steel Mechanical Tubing; 2011.
- C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2010.
- D. ASTM E488/E488M - Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements; 2010.
- E. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs; 2013.
- F. ASTM F594 - Standard Specification for Stainless Steel Nuts; 2009.
- G. AWS D1.1/D1.1M - Structural Welding Code - Steel; American Welding Society; 2010.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the installation of anchorages for canopy items. Furnish setting drawings, templates, and directions for anchorage installation.
- B. Preinstallation Meeting: Conduct a preinstallation meeting at least one week prior to the start of the work of this section; require attendance by all affected installers.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data sheets for each product to be used, including construction details, material descriptions, dimensions and profiles of individual components, and finishing materials and methods.
- C. Shop Drawings: Indicate plans, elevations, sections, details, dimensions, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Indicate anchor and joint locations, brazed connections, transitions, and terminations.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

2. Include the design engineer's stamp or seal on each sheet of shop drawings.
- D. Welders' Certificates.
- E. Manufacturer's Installation Instructions.
- F. Manufacturer's Qualification Statement.
- G. Maintenance Data: Manufacturer's instructions for care and cleaning.
- H. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
- B. Welder Qualifications: Show certification of welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect components and accessories from corrosion, deformation, damage, and deterioration when stored at job site. Keep materials free from dirt and foreign matter.

1.07 FIELD CONDITIONS

- A. Field Measurements: Where canopy is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on shop drawings.
 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating canopies without field measurements. Coordinate other construction to ensure that actual dimensions correspond to established dimensions.

1.08 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Warranty: Manufacturer's standard one year warranty against defects in materials, fabrication, finishes, and installation commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. D & D Industries, LLC, 20-C Vatrano Road, Albany, NY 12205: (518) 469-8118, dandindustriesllc@hotmail.com.
- B. Substitutions: See Section 016000 - Product Requirements.

2.02 CANOPIES - GENERAL REQUIREMENTS

- A. Provide complete, pre-engineered canopies of the design indicated on the drawings, fabricated accurately for anchorage to building structure.
- B. Regulatory Requirements: Provide canopies complying with the most stringent requirements of local, state, and federal regulations; where requirements of the contract documents exceed those of regulations, comply with the contract documents.
- C. Structural Design: Provide complete canopy assemblies complying with the following:
 - 1. Uniform Live Load: 20 lb/sq ft
 - 2. Wind Load: 100 mph.
 - 3. Snow Load: 30 psf.
- D. Dimensions and Configurations: As indicated on drawings.
- E. No sharp or rough areas on exposed travel surfaces and surfaces accessible to touch.
- F. Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.
- G. Anchors and Related Components: Same material and finish as item to be anchored, except where specifically indicated otherwise; provide all anchors and fasteners required.
- H. Finish: Directional satin finish, No. 4

2.03 MATERIALS

- A. Sheet, Strip, Plate, and Flat Bar: ASTM A666, Type 304.
- B. Tubing: ASTM A554, Grade MT 304.
- C. Bars and Shapes: ASTM A276, Type 304.
- D. Expansion Anchors: Anchor bolt and sleeve assembly; ASTM F593 and F594, Alloy Group 1; capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, tested in accordance with ASTM E488.

- E. Post-Installed Anchors: Torque-controlled expansion anchors or Chemical anchors; ASTM F593 and F594, Alloy Group 1.
- F. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- G. Sheet thickness: 18 gauge.

2.04 FABRICATION

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Fabricate components with joints tightly fitted and secured.
- D. Form joints exposed to weather to exclude water penetration.
- E. Welded Joints:
 - 1. Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
 - 2. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- F. Finish exposed surfaces to smooth, sharp, well-defined lines and arris.

2.05 FINISHES

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Verify field dimensions of locations and areas to receive work.

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| Mitchell Associates Architects, PLLC Putnam Valley Fire Station #1 | Stainless Steel Canopies 107316.13-4 |
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- C. Notify Architect immediately of conditions that would prevent satisfactory installation.
- D. Do not proceed with work until detrimental conditions have been corrected.
- E. Furnish components to be installed in other work to installer of that other work, including but not limited to blocking, sleeves, inserts, anchor bolts, embedded plates and supports for attachment of anchors.

3.02 PREPARATION

- A. Clean surfaces to receive units. Remove materials and substances detrimental to the installation.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints and uniform reveals for joint fillers and sealants.
- C. Anchor securely to structure.
- D. Field weld components indicated on shop drawings.
- E. Perform field welding in accordance with AWS D1.1/D1.1M.
- F. Install concealed gaskets, joint fillers, insulation, and flashings as work progresses.
- G. Obtain approval prior to site cutting or making adjustments not scheduled.
- H. Do not cut or abrade finishes that cannot be completely restored in the field.
- I. Restore damaged finishes so no evidence remains of corrective work.
- J. Return canopies that cannot be refinished in the field to the manufacturer for the required alterations; refinish entire canopy units or provide new canopies.

3.04 CLEANING

- A. Clean stainless steel thoroughly with clean water and soap, rinse with clean water, and dry with soft cloths.

3.05 PROTECTION

- A. Protect installed canopies from subsequent construction operations.
- B. Restore protective coverings damaged during shipment or installation. Retain protective coverings intact for entire construction period.

- C. Remove coverings simultaneously from similarly finished items to preclude non-uniform oxidation and discoloration.

END OF SECTION