

DIVISION 10

SPECIALTIES

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Porcelain Enamel Steel Markerboards.
- B. Tackboards.

1.2 RELATED SECTIONS

- A. Section 06114 – Wood Blocking and Curbing.

1.3 REFERENCED STANDARDS

- A. American Society for Testing Materials
 - 1. ASTM E84 Standard Test Method for Surface Burning Characteristics for Building Materials.
 - 2. ASTM B221 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wires, Profiles and Tubes.
- B. Porcelain Enamel Institute
 - 1. PEI-1002 Manual and Performance Specifications for Porcelain Enamel Writing Surfaces.
- C. GREENGUARD Environmental Institute
 - 1. GREENGUARD Indoor Air Quality Certified.
 - 2. GREENGUARD Children and Schools Indoor Air Quality Certified.

1.4 SUBMITTALS

- A. Shop Drawings: Provide shop drawings for each type of visual display board required.
- B. Product Data: Provide technical data for materials specified. Include Material Safety Data Sheets, when applicable.
- C. Samples and Color Charts: Provide manufacturer's color charts and composition samples of face, core, backing and trim to illustrate finish, color and texture, where required.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Manufacture shall be a firm engaged in the manufacture of visual display boards in the United States.
 - 2. Manufacturer shall have a minimum of 5 years experience in the manufacture of visual display boards.

- B. Regulatory Requirements: Conforms to applicable code for flame/smoke rating in tackboards in accordance with ASTM E84.
- C. Product Certifications: Provide GREENGUARD Indoor Air Quality Certified and GREENGUARD Children and Schools certificates for markerboards, as applicable.
- D. Operation and Maintenance: Include data on regular cleaning, stain removal, and precautions.

1.6 PROJECT CONDITIONS

- A. Field measure prior to preparation of shop drawings and fabrication to ensure proper fit.
- B. Comply with manufacturer's recommendations for acclimating area for interior moisture and temperature to approximate normal occupied conditions.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Schedule delivery of visual display boards with spaces sufficiently complete so that visual display boards can be installed upon delivery.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store materials protected from exposure to harmful weather conditions and at temperatures and humidity conditions recommended by manufacturer.

1.8 WARRANTY

- A. Submit a "Life of the Building" warranty, stating that under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations, Claridge porcelain enamel steel markerboard and chalkboard writing surfaces are guaranteed for the Life of the Building. Guarantee covers replacement of defective boards but does not include cost of removal or reinstallation.
- B. Submit a standard warranty, stating that when installed in accordance with manufacturer's instructions and recommendations, Claridge tackboards are guaranteed for one year against defects in materials and workmanship. Guarantee does not cover normal wear and tear, improper handling, any misuse, or any defects caused by vandalism or subsequent abuse. Guarantee covers replacement of defective material but does not include cost of removal or reinstallation.
- C. Writing Surface Warranty Period: 5 years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Claridge Products and Equipment, Inc.
- B. Other Acceptable Manufacturers:
 - 1. Greensteel
 - 2. Ghent
 - 3. Nelson Adam Co.

2.2 MATERIALS FOR MARKERBOARD PANELS

- A. Writing Surface Face Sheet – Manufactured in accordance with Porcelain Enamel Institute’s specification.
 - 1. Shall be enameling grade cold rolled steel manufactured from a minimum of 30 percent post-consumer and post-industrial waste.
 - 2. Enameling grade steel shall be coated with LCS-II Porcelain Enamel by Claridge Products and Equipment.
 - a. 3-Coat process shall include:
 - 1) Bottom Ground Coat – 1.5 to 2.2 mils
 - 2) Top Ground Coat – 2.0 to 2.8 mils
 - 3) Top Cover (Color) Coat – 3.0 to 4.0 mils
 - 3. Firing Temperature: Enamel shall be fired at lowest possible temperature to reduce steel and porcelain stresses and achieve superior enamel and hardness.
 - 4. Color: As selected by architect from manufacturer’s standards.
- B. Writing Surface Core
 - 1. 7/16” Medium Density Fiberboard (MDF) composed of approximately 90% post-industrial waste.
 - 2. 7/16” Duracore manufactured from 100% reclaimed or recycled wood fiber, including 3% post-consumer wood fiber. Duracore does not contain added urea-formaldehyde resins.
- C. Writing Surface Backing
 - 1. Moisture Barrier Back
 - 2. Foil Back
 - 3. Aluminum Sheet Back
 - 4. Steel Back
- D. Factory Framed Markerboards and Chalkboards
 - 1. Face Sheet: LCS-II porcelain enamel sheet Markerboard.
 - 2. Core Material: 7/16” Duracore
 - 3. Backing: Aluminum Sheet Back
 - 4. Series: 5/8” face with mitered corners
 - 5. Typical Arrangement: Type A.
 - 6. Panel Size: Nominal 4’-0” H x varying widths

2.3 MATERIALS FOR TACKBOARD PANELS

- A. Claridge Cork: Composed of 1/4" thick-self-healing, burlap cork laminated to a 1/4" hardboard backing.
- B. Fabricork: Vinyl fabric on cork underlay with 1/4" hardboard backing.
- C. Designer Fabric: Polyester Fabric on cork underlay with 1/4" hardboard back.
- D. Hook-Fab: Hook and loop compatible fabric on cork underlay with 1/4" hardboard back.
- E. Tan Nucork: Pure grain natural cork (without burlap backing) on 1/4" hardboard back.
- F. Colors: Select from manufacturer's standard colors.
- G. Thickness: Total laminated thickness of core and covering is 1/2". All thicknesses are nominal.
- H. Factory Framed Tackboards
 - 1. Tack Surface: Designer Fabric.
 - 2. Series: 5/8" face with mitered corners.
 - 3. Typical Arrangement: Type CO
 - 4. Panel Size: Nominal 4'-0" H x varying widths.

2.4 ALUMINUM TRIM

- A. Trim shall be 6063 alloy grade aluminum with T5 tempering in accordance with ASTM B221, and shall have 201-R1 satin anodize finish.
 - 1. Factory Built Trim: 5/8" trim with mitered corners.
- B. Accessories
 - 1. Marker Tray/Chalkthrough
 - a. Standard continuous, solid, blade-type aluminum tray with ribbed section and injection molded end closures at bottom of each markerboard or chalkboard.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

- A. Verify before installation that interior moisture and temperature approximate normal occupied conditions.
- B. Verify that wall surfaces are true and plumb and are prepared and ready to receive boards.

3.2 INSTALLATION

- A. Deliver factory built units completely assembled and of dimensions shown in details and in accordance with manufacturers shop drawings as approved by the architect.
- B. Follow manufacturer's instructions for storage and handling of units before installation.
- C. Do not install boards on damp walls or in damp and humid weather without heat in the building.
- D. Install level and plumb, keeping perimeter trim straight in accordance with manufacturer's recommendations.

3.3 ADJUST AND CLEAN

- A. Verify that all accessories are installed as required fro each unit.
- B. At completion of work, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Dimensional characters (by allowance).
 - 2. Panel signs.

1.2 DEFINITIONS

- A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for signs.
 - 1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 - 2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
 - 1. Aluminum.
 - 2. Acrylic sheet.
 - 3. Polycarbonate sheet.
- D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
 - 1. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).
 - 2. Panel Signs: Not less than 12 inches square.
- E. Sign Schedule: Use same designations indicated on Drawings.
- F. Qualification Data: For fabricator.
- G. Maintenance Data: For signs to include in maintenance manuals.
- H. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

- B. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- C. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when [existing and forecasted] weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 COORDINATION

- A. Coordinate placement of anchorage devices with templates for installing signs.

1.7 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 and polymer finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image colors and sign lamination.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
- C. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- D. Steel:
 - 1. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coating, either commercial or forming steel.
 - 2. Steel Sheet: Uncoated, cold-rolled, ASTM A 1008/A 1008M, commercial steel, Type B, exposed or electrolytic zinc-coated, ASTM A 591/A 591M,

- with steel sheet substrate complying with ASTM A 1008/A 1008M, commercial steel, exposed.
 - 3. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304, stretcher-leveled standard of flatness.
 - 4. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529/A 529M or ASTM A 572/A 572M, 42,000-psi minimum yield strength.
 - 5. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.
- E. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- F. Polycarbonate Sheet: Of thickness indicated, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:
- 1. Impact Resistance: 16 ft-lbf/in. per ASTM D 256, Method A.
 - 2. Tensile Strength: 9000 lbf/sq. in. per ASTM D 638.
 - 3. Flexural Modulus of Elasticity: 340,000 lbf/sq. in. per ASTM D 790.
 - 4. Heat Deflection: 265 deg F at 264 lbf/sq. in. per ASTM D 648.
 - 5. Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abraser with a load of 500 g per ASTM D 1044.
- G. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications.

2.2 DIMENSIONAL CHARACTERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- 1. A. R. K. Ramos.
 - 2. ASI-Modulex, Inc.
 - 3. Gemini Incorporated.
- B. Fabricated Channel Characters: Form exposed faces and sides of characters to produce surfaces free from warp and distortion. Include internal bracing for stability and attachment of mounting accessories. Comply with the following requirements:
- 1. Aluminum Sheet: Not less than 0.090 inch thick.
 - a. Finish: Painted.
 - b. Color: As selected by Professional from manufacturer's full range.
 - 2. Steel Sheet: Painted, not less than 0.050 inch thick for face and 0.031 inch thick for returns.
 - a. Color: As selected by Professional from manufacturer's full range.
 - 3. Provide manufacturer's hardware for projection mounting of channel characters at distance from wall surface indicated.
- C. Dimensional Character Sign Schedule:
- 1. Sign Type:
 - a. Sign Size: As indicated.
 - b. Character Size: As indicated.

- c. Text/Message: As indicated.
- d. Location: As indicated.

2.3 PANEL SIGNS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. APCO Graphics, Inc.
 - 2. ASI-Modulux, Inc.
 - 3. Gemini Incorporated.
 - 4. InPro Corporation

- B. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
 - 1. Acrylic Sheet: 0.060 inch thick.
 - 2. Phenolic-Backed Photopolymer Sheet: Provide light-sensitive, water-wash photopolymer face layer bonded to a phenolic base layer to produce a composite sheet with overall, face layer, and base-layer thicknesses, respectively, of 0.120, 0.040, and 0.080 inch.
 - 3. Edge Condition: Square cut.
 - 4. Corner Condition: Square.
 - 5. Mounting: Unframed.
 - a. Wall mounted with two-face tape.
 - 6. Color: As selected by Professional from manufacturer's full range.
 - 7. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.

- C. Changeable Message Inserts: Fabricate signs to allow insertion of changeable messages in the form of transparent covers with paper inserts printed by Owner.
 - 1. Furnish insert material and software for creating text and symbols for PC-Windows computers for Owner production of paper inserts.

- D. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
 - 1. Panel Material: Clear acrylic sheet with opaque color coating, subsurface applied.
 - 2. Raised-Copy Thickness: Not less than 1/32 inch.

- E. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are UV and water resistant for three years for application intended.
 - 1. Color: As selected by Professional from manufacturer's full range.

- F. Panel Sign Schedule:
 - 1. Sign Type:
 - a. Sign Size: As indicated.

- b. Message Panel Material: As indicated.
- c. Message Panel Finish/Color: As indicated.
- d. Background Finish/Color: As indicated.
- e. Character Size: As indicated.
- f. Character Finish/Color: As indicated.
- g. Panel Sign Frame Finish/Color: As indicated.
- h. Text/Message: As indicated.
- i. Location: As indicated.

2.4 DEDICATION PLAQUE

- A. Dedication Plaque: Cast Aluminum Dedication Plaque as detailed. Shall be supplied and installed by this section under a \$2,500 material allowance for materials. Installation cost shall be included in base bid.

2.5 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.6 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
 - 1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
 - 2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 - 3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 - 4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. 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.

2.8 ALUMINUM FINISHES

- A. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.
 - 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils, medium gloss.

2.9 STEEL FINISHES

- A. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
- B. Factory Priming for Painted Finish: Apply shop primer specified below immediately after surface preparation and pretreatment.
 - 1. Shop Primer: Manufacturer's or fabricator's standard, fast-curing, lead- and chromate-free, universal primer, selected for resistance to normal atmospheric corrosion, for compatibility with substrate and field-applied finish paint system indicated, and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- C. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils.

2.10 ACRYLIC SHEET FINISHES

- A. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for three years for application intended.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items including anchor inserts are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply.
 - 1. Two-Face Tape: Mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 - 2. Silicone-Adhesive Mounting: Attach signs to irregular, porous, or vinyl-covered surfaces.
 - 3. Signs Mounted on Glass: Provide matching opaque plate on opposite side of glass to conceal mounting materials.
- C. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - 1. Flush Mounting: Mount characters with backs in contact with wall surface.
 - 2. Projected Mounting: Mount characters at projection distance from wall surface indicated.

3.3 CLEANING AND PROTECTION

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

3.4 SCHEDULES

- A. Provide signage as indicated on the door schedule and as detailed. Note that **ALL** doors receive signage indicating the door number. However, doors that receive both numerals and signage shall be a combined sign as detailed.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Solid Plastic (HDPE) Toilet Compartments, floor mounted, head rail braced.

1.2 RELATED SECTIONS

- A. Section 09111 - Metal Stud Framing System: In wall framing and plates for partition panel support.
- B. Section 10800 - Toilet and Bath Accessories.

1.3 REFERENCES

- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
- B. ANSI/ASTM A424 - Steel Sheets for Porcelain Enameling.
- C. ANSI/ASTM A526 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
- D. ASTM A167 - Stainless and Heat Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- E. FS RR-P-1352 - Partitions, Toilet, Complete.

1.4 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Indicate on shop drawings, partition plan and elevation views, dimensions, details of wall, floor supports, and door swings.
- C. Provide product data on panel construction, hardware, and accessories.
- D. Submit samples under provisions of Section 01300.
- E. Submit two samples 6 x 6 inches in size illustrating panel finish, color, and sheen.
- F. Submit manufacturer's installation instructions under provisions of Section 01300.

1.5 WARRANTY

- A. In accordance with Section 01700, submit a manufacturer's 15 year warranty for all products against breakage, corrosion, delamination and defects.
- B. Furnish 2 year warranty against defects in material & workmanship for stainless steel hardware & brackets.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers, colors and finish schemes indicated represent a portion of the complete building finish scheme. A finish scheme must be selected in its entirety for all the finishes indicated for that scheme within the building.
- B. For complete finish scheme listing see Contract Drawings.
- C. Selection of materials from multiple finish schemes will not be acceptable. Choose one complete scheme.
- D. Manufacturers, color and sizes are indicated on Contract Drawings.
- E. No substitutions will be allowed.

2.2 COMPONENTS

- A. Doors, Panels and Pilasters shall be constructed from High Density Polyethylene (HPDE) resins, pressed under high-pressure, forming a single component. The material shall be waterproof, non-absorbent and have a self-lubricating surface that resists marks from graffiti. All plastic components shall be covered with a protective self-adhesive coating.
 - 1. Door, panel and pilaster shall be 1" thick and have edges rounded to a 3/16" radius.
 - 2. Doors and panels shall be 55" high and mounted at 14" above the finished door. An aluminum heat sink strip shall be fastened to the bottom edge of doors and panels.
 - 3. Pilasters shall be 82" high and shall be secured to the floor using a 3" high, one-piece, type 304 stainless steel shoe with a #4 satin brushed finish. Headrail of etched and anodized aluminum shall be extruded with "anti-grip" profile clamps over pilasters and shall be secured to the wall with stainless steel brackets.
 - 4. Urinal screens shall have the same construction as doors, panels and pilasters. Urinal screens shall be 42" high and mounted at 18" above the finished floor.
- B. Hardware: Mills heavy-duty aluminum hardware and stainless steel fasteners necessary to complete an installation shall be provided.
 - 1. Integral hinge system shall consist of 1/2" diameter nylon gravity cam unit with a 3/16" stainless steel center pin for the bottom and a 1/2" nylon rod for the top. The closing position of each hinge shall be fully adjustable.
 - 2. Latches shall be fabricated from heavy-duty extruded aluminum (6438-T-5 alloy). Slide bolt shall have a black anodized finish. Latch is mounted to the door with stainless steel theft-resistant bolts. Latch shall not require any twisting motion and shall be ADA compliant.
 - 3. Strike/keeper shall be 6" long and fabricated from heavy-duty extruded aluminum (6463-T-5 alloy) with wraparound flanges. Strike/keeper shall be mounted to the pilaster with thru-bolts.
 - 4. Coat hooks, door bumpers, and door pulls shall be provided in a Zamac alloy with a satin finish. Integral hinge doors 32"-36" wide shall be supplied with an individual coat hook, door bumper, and door pull. Inswing ADA doors and outswing doors shall be supplied with a double door pull.
 - 5. Continuous brackets shall be 54" long and shall be fabricated from heavy-duty aluminum (6463-T-5 alloy). Single- or double-ear brackets shall be provided at appropriate locations.
 - 6. All fasteners shall be stainless steel torx head with pin.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.
- B. Verify correct spacing of plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing, where required.
- D. Beginning of installation means acceptance of substrate.

3.2 INSTALLATION

- A. Install partitions secure, plumb, and level and in accordance with manufacturers' instructions.
- B. Maintain 3/8 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.
- D. Attach panels and pilasters to bracket with through sleeve tamperproof bolts and nuts. Locate head rail joints at pilaster center lines.
- E. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster. Conceal floor fastenings with pilaster shoes.
- F. Equip each door with continuous hinges, one door latch, and one coat hook and bumper.
- G. Install door strike and keeper with door bumper on each pilaster in alignment with door latch.
- H. Adjust hinges to locate doors in partial open position when unlatched. Return outswing doors to close position.

3.3 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.

3.4 CLEANING

- A. Remove protective masking. Clean surfaces.
- B. Field touch-up of scratches or damaged finish will not be permitted.
- C. Replace damaged or scratched materials and with new materials.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Toilet and washroom accessories.
- B. Grab bars.
- C. Attachment hardware.
- D. FRP Splashguard

1.2 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

- A. Section 04810 - Unit Masonry Assemblies: Placement of concealed anchor devices.

1.3 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Wood blocking.
- B. Section 09260 - Gypsum Board Systems
- C. Section 09300 - Tile: Ceramic accessories.
- D. Section 10170 - Toilet Partitions.
- E. Division 15 - Mechanical: Plumbing fixtures.
- F. Division 16 - Electrical.

1.4 REFERENCES

- A. ANSI A117.1 - Safety Standards for the Handicapped.
- B. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- D. ASTM A269 - Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- E. ASTM A366 - Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
- F. ASTM B456 - Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
- G. NEMA LD-3 - High Pressure Decorative Laminates.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01330.
- B. Product Data: Provide data on accessories describing size, finish, details of function, attachment methods.
- C. Manufacturer's Installation Instructions: Indicate special procedures, and perimeter conditions requiring special attention.

1.6 REGULATORY REQUIREMENTS

- A. Conform to ANSI A117.1 code for access for the handicapped.

1.7 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on product data and instructed by the manufacturer.

1.8 COORDINATION

- A. Coordinate work under provisions of Section 01300.
- B. Coordinate the work with the placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Bobrick Contura Series (Basis of Design).
- B. Other acceptable manufacturers offering equivalent products.
 - 1. Bradley Diplomat Series.
- C. Substitutions: Under provisions of Section 01600.

2.2 MATERIALS

- A. Sheet Steel: ASTM A366.
- B. Stainless Steel Sheet: ASTM A167, Type 304.
- C. Tubing: ASTM A269, stainless steel.
- D. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof, and security type.
- E. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.3 FABRICATION

- A. Weld and grind joints of fabricated components, smooth.
- B. Form exposed surfaces from single sheet of stock, free of joints. Form surfaces flat without distortion. Maintain surfaces without scratches or dents.
- C. Fabricate grab bars of tubing, free of visible joints, return to wall with end attachment flanges. Form bar with 1 1/2 inches clear of wall surface. Knurl grip surfaces.
- D. Shop assemble components and package complete with anchors and fittings.
- E. Provide steel anchor plates, adapters, and anchor components for installation.

2.4 KEYING

- A. Supply six (6) keys for each accessory to Owner.
- B. Master key all accessories.

2.5 FINISHES

- A. Galvanizing: ASTM A123 to 1.25 oz/sq yd. Galvanize ferrous metal and fastening devices.
- B. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
- C. Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats electrostatic baked enamel.
- D. Chrome/Nickel Plating: ASTM B456, Type SC 2 satin finish.
- E. Stainless Steel: No. 4 satin luster finish.
- F. Back paint components where contact is made with building finishes to prevent electrolysis.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify site conditions under provisions of Section 01300.
- B. Verify that site conditions are ready to receive work and dimensions are as indicated on shop drawings and instructed by the manufacturer.
- C. Verify exact location of accessories for installation.

3.2 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

3.3 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions and ANSI A117.1.

B. Install plumb and level, securely and rigidly anchored to substrate.

3.4 SCHEDULE (See drawings for locations).

ITEM	MODEL
1. Toilet Paper Dispenser	Bobrick B-4288
2. Mirror (18" x 48")	Bobrick B-290
3. Paper Towel Dispenser	Bobrick B-4262
4. Soap Dispenser	Bobrick B-4063
5. Not Used	
6A. 36" Grab Bar	Bobrick B-6806-36
6B. 42" Grab Bar	Bobrick B-6806-42
7. Sanitary Napkin Disposal	Bobrick B-270
8. Not Used	
9. Not Used	
10. Mop Rack w/shelf - Provide one at each custodial sink	Bobrick B-224
11. Not Used	
12. Not Used	
13. FRP Splashguards:	Provide at each Custodial sink. Width and depth to match sink, 48" H. Color as selected by Architect
14. Baby Changing Station	KB101-00

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Appliances
- B. Fixed Atrium Seating.

1.2 PRODUCTS FURNISHED BUT NO INSTALLED UNDER THIS SECTION

- A. Division 15 - Mechanical: Connection of Utilities
- B. Division 16 - Electrical: Connection of Utilities

1.3 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01330.
- B. Submit shop drawings indicating cabinetry, appliances and utility requirements.
- C. Submit product data under provisions of Section 01330
- D. Submit product data for appliances and projection screens.
- E. Submit manufacturer's installation instructions under provisions of Section 01330.

1.4 OPERATION AND MAINTENANCE DATA

- A. Submit operation data under provisions of Section 01700.
- B. Submit maintenance data under provisions of Section 01700.
- C. Include cleaning and stain removal methods and recommended cleaning materials, polishes and waxes.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.

1.6 WARRANTY

- A. Provide two (2) year warranty under provisions of Section 01700.
- B. Warranty: Include coverage for replacement parts and repair labor to correct defects in workmanship and materials. Provide a five (5) year warranty, parts and labor.
- C. Refrigerators: Provide a 3 year warranty on parts and labor and a 5 year warranty on compressor.

- D. Microwave: Full one year warranty on entire appliance including parts and labor. Limited nine year Magnetron warranty on Magnetron Tube parts.

1.7 SUBSTITUTIONS

- A. Substitutions shall be in accordance with Section 01600.

PART 2 PRODUCTS

2.1 APPLIANCES

- A. All appliances shall be supplied from the same manufacturer.
- B. Refrigerator: Equal to General Electric Model GSS20GEWBB with automatic icemaker and frost-free freezer.
 - 1. Dimensions: 20.0 cubic feet capacity; 67-1/2 inches high, 31-1/2 inches wide; 33-5/8 inches deep with 1 inch air clearance each side.
 - 2. Electric: 120 VAC / 15 amps
 - 3. Color: Black
 - 4. Location: 1004 – Lunch Room, 1504 - Kitchenette
- C. Microwave: equal to General Electric Model JEB1860DMBB with 1100 watts and 1.8 cubic foot capacity.
 - 1. Dimensions: 13 9/16” high, 23 7/8” wide, 18 13/16” deep
 - 2. Electric: 120 VAC, 13.6 amps
 - 3. Color: Black
 - 4. Locations: 1004 – Lunch Room, 1504 - Kitchenette
- D. Dishwasher: Equal to GE Tall Tub Dishwasher, Model GLD4406RBB
 - 1. Size: 33 3/4” high, 24” wide, 25” deep
 - 2. Color: Black
 - 3. Electrical: 120 V, 9.9 amp
 - 4. Location: 1004 – Lunch Room

2.2 FIXED AUDITORIUM SEATING

- A. Equal to Sauder Worship Seating conforming to the following:
 - 1. Style: Clarity
 - 2. Dimensions: 36 1/2” H x 20” W x 18 1/2” D
 - 3. Aisle Panel: Small Wood
 - 4. Seat Back: Polymer
 - 5. Arm: Lift Up
 - 6. Tablet Arm: First Row only
 - 7. Provide one (1) extra wide seat at first row
 - 8. Finish: Maple
 - 9. Upholstery: Cobblestone

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that openings are ready to receive work.
- B. Verify field measurements are as shown on shop drawings.

- C. Verify that required utilities are available, in proper locations, and ready for use.
- D. Beginning installation means installer accepts existing substrate conditions.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.3 CLEANING

- A. Clean work under provisions of Section 01700.

3.4 PROTECTION

- A. Protect finished installation under provisions of Section 01500.

END OF SECTION