**PART 1 - GENERAL**

**1.01 SUMMARY**

A. Provisions of Division 01 apply to this section.

B. Section Includes:

1. Solid phenolic toilet compartments, urinal screens, and vision screens as indicated.

C. Related Sections:

1. Section 05 41 00: Structural Metal Studs

2. Section 06 10 00: Rough Carpentry

3. Section 10 28 13: Toilet Accessories

**1.02 SYSTEM DESCRIPTION**

1. Design Requirements: Design and fabrication shall conform to requirements of ADA and CBC.
2. Toilet Compartments: Floor supported overhead braced type units consisting of solid phenolic pilasters, panels and doors; plated steel leveling devices with stainless steel covers; and stainless steel fittings, hardware and fastenings necessary for complete installation.
3. Urinal Screens: Floor supported and wall hung type consisting of solid phenolic screen panels and plated steel leveling devices with stainless steel covers, stainless steel fittings and fastening necessary for complete installation.
4. Vision Panels: Floor- and wall-mounted solid phenolic type.

**1.03 SUBMITTALS**

A. Shop Drawings: Submit Shop Drawings indicating complete layout, elevations of partitions, thickness of solid phenolic panels, fastenings, proposed method of anchoring, size and spacing of anchors, details of construction, hardware, fittings, mountings, method of assembly, other related items, and installation details.

B. Product Data: Submit manufacturer's technical data for materials, fabrication, finishing, fastenings, hardware, and installation details.

C. Material Samples:

1. Submit full range of Samples of phenolic chips for initial color selection. Chips shall be at least 2 inches x 3 inches.

2. Submit Samples of hardware and fasteners.

D. Certificates: Furnish manufacturer's certification that materials meet or exceed Specification requirements.

**1.04 QUALITY ASSURANCE**

A. Comply with the following as a minimum requirement:

1. ASTM A167: Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
2. ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
3. Chemical Resistance: Panels to meet or exceed Scientific Equipment Furniture Association’s (S.E.F.A.) list of 49 standard chemicals.
4. Consistency:
   1. Panels to have uniform thickness (+0.03”).
   2. Panels to have uniform flatness (maximum difference of 0.03”) for 10’ span.

**1.05 DELIVERY, STORAGE AND HANDLING**

A. Deliver materials to Project site with manufacturer's labels intact and legible, in sealed containers. Materials shall be kept dry.

B. Provide all means necessary to protect compartments and screens.

**1.06 COORDINATION**

A. Field Measurements: Secure field measurements before preparation of Shop Drawings and fabrication where possible, for proper and adequate fabrication and installation of the Work of this section.

B. Furnish inserts and anchorage built into other construction for installation of toilet compartments, urinal screens and vision panels.

**1.07 WARRANTY**

A. Manufacturer shall provide a 10 year material warranty.

**PART 2 - PRODUCTS**

**2.01 MANUFACTURERS**

1. Solid Phenolic Panels:

1. Scranton Products – one inch solid HDPE.

2. Bradley – Solid core

B. Hardware:

1. Galaxy Hardware, Series 8033.

2. Or equal.

**2.02 MATERIALS**

1. Toilet compartments panels, doors and pilasters; urinal screens and visual screens.

1. Core: Phenolic impregnated Kraft papers. Panel shall be at least 93 pounds per cubic foot to ensure full saturation of Kraft core.

2. Face Sheet: Separate sheet of clear melamine over decorative papers impregnated with melamine resin and integrally compression molded with the core.

3. Fire Resistance: The panels shall have the following surface burning characteristics and smoke generation values in accordance with UL classification and labeling in accordance with ASTM E84 tests and shall be self-extinguishing.

a. Flame spread: Maximum 30 for 3/4 inch thick panels; 30 for 1/2 inch thick panels.

b. Smoke developed: Maximum 70 for 3/4 inch thick panels; 85 for 1/2 inch thick panels.

4. Panels shall be UL registered and labeled.

5. Panel shall be resistant to cleaning solvents and uric acid.

6. Product/Material Specification:

* 1. Modulus of Elasticity: 1.5 million psi minimum
  2. Shear Strength: 2,000 psi minimum
  3. Compressive strength: 24,000 psi minimum.
  4. Water Absorption: 3% maximum
  5. Use Temperature: 350° F maximum
  6. Surface and Edges: Non-porous
  7. Material Resistance: Will not support fungus or bacteria
  8. Uniform Load Deflection: ¼” maximum per Table A

Table A: Uniform Load (lbs) which causes ¼” deflection at Center

(Shelves not fixed at either end, static load on E modulus of 2.0 x 106)\*

### Uniform Load in pounds

Thickness 12” by 24” 12” by 36” 12” by 48” 24” by 36”

½” 370 110 45 220

¼” 1,400 400 170 800

\* Loads can be affected by temperature, humidity, time, and other environ-mental factors. Users should test shelves in appropriate environment. It is assumed that deflection grater than ¼” is undesirable aesthetically, even though rupture has not occurred.

## Stainless Steel: ASTM A167, Type 304.

1. Concealed Fasteners and Leveling Devices:
2. Concealed Fasteners: Stainless steel.
3. Leveling Devices: Zinc or cadmium coated steel, or stainless steel.

**2.03 CHARACTERISTICS**

A. Doors shall be minimum 3/4 inch thick, panels minimum 1/2 inch thick, pilasters minimum 3/4 inch thick and screens minimum 1/2 inch thick. Edges shall be machined to a radius of 0625 inch; exposed surfaces shall be free of fabrication marks.

**2.04 FABRICATION**

A. Pilasters and Doors: Flush, formed of 3/4" thick solid phenolic panels.

1. Door Dimensions: Unless otherwise indicated, furnish 24" wide in-swinging doors for standard toilet compartments, 36" wide clear opening out-swinging doors when located at the end, and 36" wide clear opening out-swinging doors when located at the side for stalls equipped for use by the physically disabled

2. Anchorage: Provide stainless steel anchorage, complete and threaded rods, washers, and leveling adjustment nuts at pilasters, to permit connection to floor slab. Furnish devices, which are designed to support pilasters from structure without transmitting load to floor fill.

3. Overhead Bracing: Provide anti-grip, decorative, heavy duty, extruded aluminum head rail with clear anodized finish.

B. Panels and Urinal Screens: Flush, formed of 1/2" thick solid phenolic panels. Height and width as indicated in drawings.

**2.05 HARDWARE**

A. Door hardware shall be cast Type 304 stainless steel, as follows:

1. Hinges: 11 gauge Cast Stainless Steel Hinge. Hinge shall be cast of type 304 stainless steel and shall have a Satin finish. Hinge shall be gravity type for self-closing action and shall be fully adjustable up to 360 degrees. Pivot pin shall be made of type 304 stainless steel. Only stainless steel components shall be used in the construction of the Hinge. Plastic inserts are unacceptable. Hinges shall provide emergency access by lifting the door. Hinges shall be pre-drilled for mounting to door and plaster with Stainless Steel through-bolts. Stamped stainless steel is not acceptable.

2. Strike and Keeper with Emergency Access: Heavy duty cast stainless steel with a Satin finish. The strike and keeper shall be 2.50” high, with the mounting holes at 1.50” on center, and the wall thickness shall be a minimum of .125”. The strike and keeper shall have an integral rubber bumper door stop. The stock number shall be molded into the back of the strike and keeper for ease in identification. Furnish one per door. Stamped stainless steel is not acceptable.

3. Slide Latch: Heavy Duty Cast Stainless steel with a Satin finish. The slide latch shall be surface mounted. The slide bar shall be .150” thick, 1.020” wide and 3.720” long. Latch shall have an internal stainless steel buffering spring to prevent damage when door is inadvertently slammed against the latch. Mounting holes are to be spaced at 3.50” on center. Latch knob is to be riveted to the slide bar and then welded to insure that the knob will not come off. The stock number shall be molded into the back of the slide latch for ease identification. Furnish one per door. Stamped stainless steel is not acceptable.

4. Coat Hook: Heavy Duty Cast Stainless Steel with a Satin finish. Coat Hook and bumper shall be 2.340” high, 1.230” wide and shall protrude out from the door 3.05”. The hook portion shall have a finished diameter of .250” thick. The stock number shall be molded into the back of the Coat Hook and Bumper for ease in identification. Furnish one per door. Stamped stainless steel is not acceptable. Mount at 48 inches maximum above finished floor in accessible toilet compartments.

1. Door Stop: Heavy Duty Cast Stainless Steel with a satin finish. Plated Zarnac Door stops are unacceptable. Door Stop shall have a 2.125” base diameter and shall protrude 1.80” from the Wall. The bumper at the end of the Door Stop shall be .250” thick. The diameter of the shaft shall be .6875”. The stock number shall be molded into the back of the Door Stop for ease in identification. Furnish one for each Disabled Accessible door. Stamped stainless steel is not acceptable.
2. Pull Handle: Heavy Duty Cast Stainless Steel with a Satin finish. Plated Zamac Door pulls are unacceptable. Pull Handle shall protrude from the face of the door .940” and shall be 4.735” long. The Pull Handle shall have mounting holes drilled and tapped for 10/24 threads at 3.50” on center. The Pull Handle shall be .655” wide and shall be mounted back to back with the Slide Latch. The stock number shall be molded into the back of the Pull Handle for ease in identification. Stamped stainless steel is not acceptable. Provide u-pull shape handle on each side of accessible toilet compartment doors.

B. Pilaster Shoes: ASTM A167, Type 302/304 Stainless Steel, minimum 3” high, 15 gauge, finish with #3 Directional polish, attached with Stainless Steel Through Bolts.

C. Brackets: One piece double ear bracket or single ear bracket (at end partition) extending within 3 inches of top and bottom panel edges. Extruded 6063-T5 Aluminum with a satin anodized finish. The minimum weight shall be 1.685 pounds per lineal foot. Inside opening of Bracket shall be .50” for panels, .75” for pilasters. All holes for mounting to wall and panel/pilaster shall be pre-drilled. Holes are to be spaced at 9” on center along the full length of the Bracket for a total of twelve holes (double ear) for mounting to the wall and six holes (single ear) for mounting to the panel/pilaster. Each Bracket is to have a minimum wall thickness of .125”.

D. Overhead Bracing (Headrail): Continuous heavy duty extruded 6063-T5 Aluminum Headrail with anti-grip profile. Head rail shall have integral reinforcing channel and curtain track. Head rail shall have Satin Anodized finish. Provide headrail corner brackets, wall brackets, and headrail end caps as required. The headrail and headrail brackets shall have a minimum wall height of 2”. The minimum wall thickness of the headrail and head ail brackets shall be .125”.

E. Chrome-plated, non-ferrous cast alloy material shall not be furnished for hinges, brackets, locks, latches and other fittings and accessories.

**PART 3 - EXECUTION**

**3.01 EXAMINATION**

A. Before covering wall framing with finish materials, examine framing to ensure that backing plates and structural framing have been installed in such position as to receive all attachment screws.

B. Verify spacing of plumbing fixtures to ensure compatibility with installation of compartments.

C. Do not start the Work of this section until all deficiencies have been corrected.

**3.02 INSTALLATION**

A. Install partitions and screens as shown in the Shop Drawings and in accordance with manufacturer’s instructions and as specified. Install straight, level and plumb.

B. No evidence of drilling, cutting or patching shall be visible in finished Work.

C. Fasten panel brackets securely to walls and ceilings with recommended anchoring devices.

D. Fasten panels and pilasters to brackets with through bolts and nuts.

E. Fasten urinal screen panels to walls with 2 panel brackets, minimum.

F. Provide 1/2 inch spaces between wall surface and panels or pilasters.

G. Provide for adjustment of floor variations with non-breakable plastic shoes on pilasters. Conceal floor fastenings in pilaster shoes.

H. Furnish each toilet compartment door with top and bottom hinges, and door latch.

I. Install door strike keeper on each pilaster in alignment with door latch.

J. Furnish each toilet compartment door with one coat hook and bumper.

**3.03 TOLERANCES OF INSTALLED WORK**

A. Maximum Variation from Plumb or Level: 1/8 inch.

B. Maximum Misplacement from Intended Position: 1/8 inch.

**3.04 ADJUSTING AND CLEANING**

A. Hardware Adjustment: After installation, adjust hardware for proper operation. Install hinges on in-swinging doors to hold open approximately 30 degrees from the closed position when unlatched. Install hinges on out-swinging doors to return to the fully closed position. Adjust doors so that bottoms of doors are level with the bottoms of the pilasters when the doors are in the closed position.

B. Adjust and align door hardware to uniform clearance at vertical edges of doors. Clearance space shall not exceed 1/4 inch.

C. Cleaning: Clean compartments, hardware, and doors before Substantial Completion and leave free from imperfections. Remove protective coverings.

* 1. **CLEANUP**

1. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

**3.05 PROTECTION**

A. Protect the Work of this section until Substantial Completion.

### **END OF SECTION**