



41330 DATE STREET
MURRIETA, CA 92662

SECTION 10 51 29
PHENOLIC LOCKERS AND BENCHES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Phenolic lockers, hardware and accessories.
- B. Phenolic pedestal benches.
- C. Phenolic cubbies.

1.2 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry.
- B. Section 09 21 16.33 - Gypsum Board Area Separation Wall Assemblies.

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
 - 2. ASTM D 790 - Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
 - 3. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Material.
- B. EN 438-2 - High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 2: Determination of properties.
- C. NEMA LD-3 - Standard Test, Chemical Resistance, Modulus of Elasticity, Shear Strength and Compression Strength.
- D. U.S. Green Building Council (USGBC), LEED Green Building Rating System for New Construction.
- E. ADA - Americans with Disabilities (ADA) Standards for Accessible Design.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Detailed technical data for materials, fabrication, and installation, including anchors, hardware, fasteners, and accessories.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation instructions.
- C. Shop Drawings:
 - 1. Dimensioned plans detailing layout of lockers, cubbies and benches.

- a. Elevations sections, numbering, colors, details, and anchorages/ attachments to other work.
- 2. Details of anchoring components and methods for project conditions.
 - a. Identify components required for installation, but not supplied by locker manufacturer.
- D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and finish.
- E. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- F. LEED Product Data for Credit MR 4.1 and MR 4.2: For products having recycled content, documentation including percentages by weight of post-consumer and pre-consumer recycled content.
- G. LEED Product Data for Credit EQ 4.1: For adhesives used to laminate gypsum board panels to substrates, including printed statement of VOC content.
- H. LEED Product Data for Credit MR 5.1 and Credit MR 5.2: Submit data, including location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.
- I. Closeout Submittals: Provide manufacturer's executed warranty and manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have been in the business of manufacturing phenolic lockers for a minimum of five years.
- B. Installer Qualifications: Installers shall be certified by the manufacturer of the lockers being used on this project.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's original unopened packaging in accordance with manufacturer's instructions until ready for installation.
- B. Store materials indoors, protected from the elements and construction hazards.
- C. Handle materials in a manner that will protect the finished product.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Field Measurements:
 - 1. Verify dimensions for installation by field measurements prior to fabrication and indicate measurements on Shop Drawings.

2. If field measurements cannot be made without delaying the Work, establish dimensions and fabricate units without field measurements. Coordinate supports, adjacent construction, and fixture locations to ensure actual dimensions correspond to established dimensions.
- B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

- A. Provide manufacturer's 20 year written limited warranty against breakage, corrosion, delamination and defects in workmanship and material. Warranties are to be signed by an authorized manufacturer representative.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Foreman Lockers, located at: 41330 Date St, Murrieta, CA 92562 Email:info@foremanlockers.com; Web:www.foremanlockers.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 PERFORMANCE REQUIREMENTS

- A. Physical Properties, Phenolic Lockers:
 1. Scratch Resistance per EN438-2:25: 4 or better.
 2. Impact Resistance per EN438-2:21: Indentation diameter of 0 from a height of 1800 mm.
 3. Resistance to Water Vapor per EN438-2:14: 3 or better.
 4. Screw Holding Strength: Withstand a direct pull force exceeding 500 pounds at 1/4 inch of material.
 5. Tensile Strength per ASTM D 638: Minimum 145 Mpa.
 6. Flexural Strength per ASTM D790: Minimum 82.7 Mpa.
 7. Light Resistance per NEMA 3.3: Slight effect.
 8. Cleanability per NEMA 3.4: 20.
 9. Accessibility Requirements: Comply with ADA and authorities having jurisdiction.

2.3 PHENOLIC LOCKERS

- A. Provide the following configurations to the overall dimension as indicated on the Drawings.
- B. Panel Material:
 1. Decorative papers impregnated with melamine resin on faces with a clear protective overcoat; integrally compression molded within a core consisting of solid phenolic impregnated kraft papers.
 2. Fire Rating: Choose One. Default is Class B. Core or panel material meeting fire Class B resistance per ASTM E84, Core or panel material meeting fire Class A resistance per ASTM E84.
 3. Standard Phenolic:
 - a. Color: As determined by the Architect from manufacturer's selection of Fundermax Colors.
 4. Solicor Phenolic:

- a. Color: As determined by the Architect from manufacturer's selection.
- C. Locker Body Construction:
 - 1. Doors, End Panels, Filler Panels, Sloped Top, and Ancillary Panels:
 - a. Material: 3/8 in (10 mm) thick solid phenolic composite material.
 - b. Interior Locker Colors: Fundermax 0606 Artic White.
 - c. Corners: Eased edges.
 - d. Door Fastening: Blind fastening unless through bolts are requested.
 - e. Panel Edges: Phenolic panel edges are black.
 - f. Joint Construction: Mortise and tenon. Tops, bottoms and shelves use mortised joints and are secured with mechanical fasteners.
 - g. Exposed Edges: Straight profile; eased edges to remove sharpness; machine polished and free from tooling imperfections.
 - h. Tops, Bottoms, and Intermediate Shelves: 3/8 in (9.5 mm) thick solid phenolic composite material with ventilation holes.
 - i. Locker Sides and Backs: Minimum 5/16 in (8 mm) thick solid phenolic composite material.
 - j. Wall Mounting Cleats: Minimum 3/8 in (9.5 mm) thick solid phenolic.
- CI. Ventilation
 - 1. Vertical Ventilation: Four, 3/8 in (10 mm) diameter ventilation holes on tops, bottoms, and intermediate shelves. Four 3/8 in (10 mm) diameter ventilation holes on "Z" type intermediary shelves.
 - 2. Horizontal ventilation: Ventilation around edge of door equal to 1.43 sq in (922.6 sq mm) of ventilation surface area per linear foot of door perimeter.
 - 3. OPTIONAL: Additional Door Ventilation: Through door ventilation with 3/8 in (10 mm) holes drilled into a horizontal or vertical pattern. 50 or 100 percent additional ventilation.
- CII. Hardware:
 - 1. Fasteners: Stainless steel.
 - a. Fastening: Concealed.
 - b. Fastening: Through bolt door.
 - 2. Door Hinges: Concealed five knuckle butt hinge; 90 degrees stainless steel barrel hinge.
 - a. Two hinges: Doors up to and including 36 in (914 mm) tall.
 - b. Three hinges: Doors greater than 36 in (914 mm) tall.
 - 3. Door Hinges: ADA concealed five knuckle butt hinge; 180 degrees stainless steel barrel hinge.
 - a. Two hinges: Doors up to and including 36 in (914 mm) tall.
 - b. Three hinges: Doors greater than 36 in (914 mm) tall.
 - 4. Interior Side Hooks: Aluminum.
 - a. One per opening, for openings up to 36 in (914 mm) tall.
 - 5. Door Identification Plates: 1.88 x 3.38 in (48 x 86 mm) Brushed aluminum with engraved numbers and surface mounted with permanent adhesive.
 - a. Fonts: 3/4 in (19 mm) high minimum; up to four characters.
 - b. Numbering Sequence: Provided by the Architect.
 - 6. Door Locks: Choose from one of the following. Brushed aluminum hasp for customer supplied padlock, Built in combination lock, Built in key lock, Built in coin/token lock, Built in digital day use lock, Built in digital assigned use lock, Built in mechanical day use lock, Built in mechanical assigned use lock, Built in RFI lock.
- CIII. Accessories and Options:
 - 1. Finished Locker Top: Standard. 0606 Artic White.

2. Finished Locker Top: Flat. 3/8 in (10 mm) thick. Top color to match lockers.
3. Finished Locker Top: Sloped. 3/8 in (10 mm) thick. Top color to match lockers. 20 degree rise from front to back, using an extruded aluminum channel across the front.
4. Finished Fascia: 3/8 in (10 mm) thick by 4 inch tall front fascia panel. Color to match lockers.
5. Coat Rod: Installed in locker openings greater than 30 in (762 mm) high and 18 in (457 mm) deep.
6. Adjustable Locker Base: Adjustable locker feet with 3/8 in (10 mm) solid phenolic kick plate. Color to match with lockers. Adjustable Range: 3-3/4 to 5 in (95 x 127 mm).

2.4 PHENOLIC PEDESTAL BENCHES

- A. Panel Material:
 1. Decorative papers impregnated with a melamine resin on faces with a clear protective overcoat and integrally compression molded within a core consisting of solid phenolic impregnated kraft papers.
 2. Fire Rating: Core or panel material meeting fire Class A resistance per ASTM E84.
 3. Fire Rating: Core or panel material meeting fire Class B resistance per ASTM E84.
- B. Solid phenolic benches mounted on pedestals.
 1. Bench (WxT): 12 x 5/8 in (305 x 16 mm) thick solid phenolic.
 - a. Lengths: As indicated on the Drawings.
 - b. Pedestals: Choose One. Stainless steel, Movable stainless steel.
 2. ADA Bench:
 - a. Dimensions (WxLxT): 20 x 42 x 5/8 in (504 x 1067 x 16 mm) thick solid phenolic.
 - b. Dimensions (WxLxT): 23 x 48 x 5/8 in (600 x 1200 x 16 mm) thick solid phenolic.
 - c. ADA Pedestals: 4, Stainless steel,
 - d. Solid phenolic back rests attached with matching brackets.

2.5 CUBBIES

- A. Panel Material:
 1. Decorative papers impregnated with a melamine resin on faces with a clear protective overcoat and integrally compression molded within a core consisting of solid phenolic impregnated kraft papers.
 2. Fire Rating: Core or panel material meeting fire Class A resistance per ASTM E84.
 3. Fire Rating: Core or panel material meeting fire Class B resistance per ASTM E84.
- B. Configuration:
 - a. Dimensions: As detailed on the Drawings.
- C. Construction:
 1. Mortised joints with mechanical fasteners.
 2. Tops, Bottoms, and Intermediate Shelves: 3/8 in (9.5 mm) minimum thick solid phenolic composite material.
 3. Cubbie Sides and Backs: 3/8 in (9.5 mm) minimum thick solid phenolic composite material.
 4. Cubbie Mounting Cleats: 3/8 in (9.5 mm) minimum thick solid phenolic.
 - a. Mounting Cleats: 2, required for wall mounted installations.
 5. Color: Single color available in a full range of colors from Fundermax.
 - a. Phenolic panel edges are black.

6. Exposed Edges: Straight profile; eased edges to remove sharpness; machine polished and free from tooling imperfections.
- D. Hardware:
1. Interior Side or ceiling hooks:
 - a. Material: Aluminum. Plastic and nylon hooks are not acceptable.
 - b. One per opening for all openings 36 in (914 mm) tall or greater.
 2. Fasteners: Fasteners shall be stainless steel.
- DI. Accessories and Options:
1. Standard Top: Cubbie top is white body material.
 2. Flat Top: Solid phenolic, color matched with cubbies and installed flat.
 3. Sloped Top: Solid phenolic color matched with lockers and installed at a 20 degree rise from front to back, using an extruded aluminum channel.
 4. Adjustable Base: Adjustable locker feet with matching solid phenolic kick plate. Adjustable from 3-3/4 to 5 in (95 to 127 mm).

2.6 FABRICATION

- A. General: Provide factory pre-assembled units complete with all hardware and accessories listed above.
- B. Slope Tops and End Panels: Provide as required to complete the installation indicated on the Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that field dimensions are in accordance with Locker Shop Drawings. Inspect walls to ensure that they are plumb and suitable for the Wall Brackets.
- C. Check location of built up bases, built in framing or blocking, and wall openings to ensure that they comply with the approved Locker Shop Drawings.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 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.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction.
- B. Install lockers rigid, straight, plumb, and level. No evidence of drilling, cutting and patching shall be visible in finished work.
- C. Install all required trim, fillers, end panels, and closures per manufacturer's instructions.
- D. Anchor lockers to the wall with provided anchor devices as recommended by manufacturer.

- E. Attach number plates to doors as indicated on shop drawings.
- F. Install sloped tops, end panels, filler strips and accessories in accordance with manufacturer's written instructions.

3.4 ADJUSTING AND CLEANING

- A. Adjust hardware according to manufacturer's written instructions for smooth operation without binding.
- B. Lubricate door hinges and locks per manufacturer's instructions.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Clean all exposed surfaces of lockers and hardware and touch-up, repair or replace damaged products before Substantial Completion. Do not use abrasive cleaners.

END OF SECTION