

MODULAR WALLS

Division 10, Section 10 22 19 and/or 10 22 23



1. RELATED DOCUMENTS

The drawings and general provisions of the contract, including GENERAL and SUPPLEMENTARY CONDITIONS, and all Specification Sections apply to the Work specified in this Section.

2. DESCRIPTION OF WORK

A. Modular walls as shown on the Drawings.

B. The work shall include:

- 1) Furnishing, delivering to the building, uncrating, setting in place and leveling all modular walls shown on the Drawings and listed in the Specifications.
- 2) Furnishing and installing raceway, boxes, connections and wiring for electrical power switches.
- 3) Furnishing and installing raceway and boxes for computer/data cabling and telecommunications.
- 4) Furnishing and installing doors, frames, hardware locksets and passage sets in modular walls.
- 5) Furnishing and installing pre-glazed panels in modular wall.
- 6) Furnishing and installing frameless glass panels in modular wall

C. Work specified elsewhere in the general contract for construction of the project:

- 1) Furnishing and installing data/communications cable, cable wiring devices other than boxes, and coverplates.
- 2) Furnishing and installing electrical wiring devices other than boxes, and coverplates, and making connections of wiring in modular wall panels to building wiring systems.

3. QUALITY ASSURANCE

A. It is the intent of these Specifications and applicable Drawings to show and define the essential minimum requirements as to the quality of materials, construction, finish, and overall workmanship. Modular walls differing from that specified will not be considered unless ample proof is submitted in the form of drawings, descriptions, samples, and test results indicating all essential requirements of the Specifications are strictly adhered to.

B. The product warranty extends only to the original purchasers acquiring new products. Warranty shall cover all materials and labor for a limited lifetime.

C. The modular wall panels shall be manufactured by a single firm specializing in the production of modular partitions and with a minimum of ten (10) years of successful experience in applications similar to the requirements of this project.

D. The modular wall installer shall have a minimum of five (5) years of successful experience in the installation of modular wall panel systems, shall have previous experience in projects of this approximate magnitude, and shall be authorized to do installation by the manufacturer of the modular wall system. Installation supervision shall be by an experienced supervisor trained in specialized methods of construction and approved by the modular wall system manufacturer.

4. CODES AND STANDARDS

Comply with the provisions of the following to the extent referenced:

- 1) ASTM C 36, Gypsum Wallboard.
- 2) ASTM C 442, Gypsum Backing Board and Coreboard.
- 3) ASTM E 90, Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- 4) ASTM E-72, Standard Methods of Conducting Strength Test of Panels for Building Construction.
- 5) ASTM E 84 Surface Burning Characteristics of Building Materials.
- 6) ASTM E 413, Classification for Determination of Sound Transmission Class.
- 7) Factory Mutual Publication, Specification Tested Building Materials Guide, 1985.
- 8) UL Publication, Fire Resistance Directory (January, 1985 with Quarterly Supplements.)
- 9) ANSI/BIFMA X5.6-1986 American National Standard for Office Furnishings Test

5. SUBMITTALS

A. Submit product data, shop drawings, samples, fabrication specifications and installation instructions as specified in GENERAL REQUIREMENTS and as described herein.

B. Submit six (6) copies of manufacturer's data shop drawings and instructions. Two (2) copies will be retained by the Architect. Submit two sets of samples, both will be retained by the Architect.

- C. Submit test data from independent testing agencies indicating that all performance characteristics specified in Paragraphs 9, 10, and 11 of this Section have been complied with.
- D. Submit samples of each required finish and color. Prepare samples on same materials which will be used in wall assemblies.

6. DELIVERY, STORAGE AND HANDLING

- A. Deliver modular wall components boxed or crated to provide protection during transit and job storage.
- B. Inspect wall components upon delivery for damage. Minor damages may be repaired provided finish items are equal to new work and acceptable to Architect. Remove and replace damaged items as directed.
- C. Store materials in dry, protected areas in which it is possible to maintain a constant minimum temperature of 55°F.

7. GENERAL REQUIREMENTS

- A. Floor to ceiling type with interchangeable standardized units which can be rearranged in any desired combination within a given wall space.
- B. Extension in any direction without removing adjacent units (non-progressive).
- C. Capable of relocation without unit disassembly (i.e., demountable products requiring complete disassembly for relocation or which suffer material damage to panels, framing or other components, are not acceptable).
- D. Erected over finished floor materials including carpet.
- E. Ability for leveling when installed over out-of-level floors.
- F. Continuous installations with fasteners concealed.

8. MANUFACTURER

Basis of Design: Volo Wall manufactured by Trendway Architectural product, division of Fellowes Contract Interiors. Trendway, 13467 Quincy St, Holland, MI 49422-9016, 1-800-893-8115. www.trendway.com

9. PARTITION SYSTEMS

- A. Provide modular walls of type, size, materials and finishes indicated, or if not indicated, provide units as recommended by the manufacturer for the type of service indicated.
- B. Provide modular walls complete with finished floor and ceiling channels, vertical support framing, glazing framing and stops, anchorage and accessories for complete, stable installation.

Partition Construction

- 1) Modular walls shall consist of unitized modular panels, factory laminated, and factory assembled by the manufacturer under controlled conditions. Panel assembly not to exceed 250# per unit.
 - 2) Maximum panel width to be 48". Maximum allowable ceiling height shall be 10 feet. Installations with ceiling heights greater than 10 feet or widths greater than 48" shall require prior approval by manufacturer.
 - 3) Panels to be available in ½" increments in height from 88" to 120". Widths to be available from 6" to 48" in 1/8" increments
 - 4) Solid Panel construction of 2¼" thick aluminum frame supported on two adjustable leveling feet, faced both sides with treated-wood or tackable substrate with acoustical treatment interior.
 - 5) Panels shall have been tested in an independent laboratory for screw holding ability and rated at an average resistance of not less than 190 pounds manual and 279 of shear for 1" R.H. No. 10 screw.
 - 6) All panels shall be pre-finished with vinyl, fabric, veneer or high-pressure plastic laminate, color and pattern to be selected by the Architect from the manufacturer's current color line.
 - 7) The modular wall shall have non-progressive capabilities without damage to panel surfaces. Double-sided tape, Velcro or other non-mechanical attachments are not acceptable.
 - 8) Glass Panel construction of 2¼" thick aluminum frame supported on two adjustable leveling feet, ¼" glass in single or multiple segments as required by design.
 - 9) Panels in combination of ¼" glazing and solid panel materials shall be available in all height and widths with all tile heights available in ½" height increments within the panel.
 - 10) Frameless glass panels in ½" tempered or safety glass to utilize 2¼" thick aluminum horizontal and vertical framing components as required by layout.
- D. Doors and Door Frames
- 1) All exposed aluminum shall be extruded from a controlled alloy billet and shall have a four-stage treatment prior to the electrostatic application of paint-like coating, then baked and cured to a 2H

minimum hardness, a one mil. minimum thickness, and a gloss of 25 (±5) smooth finish. The paint-like coating shall conform to the Aluminum Association Specification R-10. Anodized finish options shall equal Clear Etch Anodized "CE" AA-C22A213

- 2) Aluminum door frames shall be assembled plum and square. Frames are to be prepared for hardware including proper reinforcing, drilling and tapping. Miters at corners of frames shall be anchored with concealed clips. Frames must include soft vinyl bulb-type light and sound seal, for swing or sliding applications.
 - 3) Doors shall be available in swing or surface applied sliding styles in various width and heights.
 - 4) Install wood or aluminum doors in all door openings in modular walls.
 - 5) Wood Doors shall be 1¾" thick, solid core wood doors of size and design as shown on the Drawings. Doors shall be of stile and rail construction, manufactured according to the Architectural Woodwork Institute (AWI) Specification #1400, Custom Grade, for stile and rail wood doors. Exposed surfaces shall be finished in manufacturers standard veneers and colors.
 - 6) Wood doors shall be available flush or with full view windows.
 - 7) Aluminum doors shall be 1¾" thick, aluminum framed ¼" glass doors as shown on the Drawings. Doors shall be of stile and rail construction, Stiles available in 2-5/8" or 4" face dimensions. Rails available in 2-5/8", 4" or 10" bottom rail as specified.
 - 8) Frameless glass doors shall be available in ½" tempered safety glass, clear, frosted or low-iron
- D. Hardware**
- 1) Each swing door shall be hung with two pair of 4½" x 4½" x 0.134" five knuckle non rising loose pin, button tipped, ball-bearing, full mortise, wrought steel hinges conforming to ANSI A156.1 and BHMA No. A8112. Frameless Glass swing doors shall be hung on 2 Biloba Door closer hinges with 90 degree open and hold-open features
 - 2) Locksets and passage sets.
 - a. Lever Passage Set shall conform to ANSI A156.2 1976 Grade 2 requirements; brass ½" throw latch bolt projects to 1" throw with Delrin AF insert hardened steel insert; 4 ⅞" curved lip ASA strike; cast bronze and stainless steel trim with precision machined internal parts of hardened steel; 2 3/8" back set; 1⅞" x 2" brass front.
 - b. Lever or lockset shall conform to ANSI A156.2 1976 Grade 2 requirements, Fed. Spec. FF-H-00106B; brass ½" throw latch bolt projects to 1" throw with Delrin AF insert and hardened steel insert; 4 ⅞" curved lip ASA strike cast bronze and stainless steel trim with precision machined internal parts of hardened steel; 2¾" back set; 1⅞" x 2¼" brass front. Finishes to be manufacturer's standards. Available with random key of SFIC core (no core provided).
 - c. Frameless door lever shall be minimum patch (5.5" x 2.2") in passage style or locking with random key or SFIC core.
 - 5) Doors shall be pre-fit, pre-machined, veneers shall be sanded and pre-finished, aluminum framework shall be pre-finished at the factory. Bevel doors 1/8" in 2" at lock edge. Comply with hardware templates.
 - 6) Install doors in accordance with NFPA No. 80 with ½" minimum latch throw. Clearances shall be ⅛" at jambs and heads and ½" from bottom of door to top of floor finish.
 - 7) Install floor mounted door stops, 2" diameter, low rise, cast units, No. 10 finish, with molded rubber bumper insert. Unit shall be provided with a non-rotational positioning stud to penetrate into floor with screws.
 - 8) Each sliding door will be supported by custom profile aluminum track and Hawa Jr 80 wheelset trolleys. Track shall include valance covers on 2 sides with vinyl acoustic seals hitting the top faces of the door. Receiver Post shall have bumper and 2 acoustic seals to receive the front edge of door. Trailing edge of door will align with acoustic seal on doorframe.
 - 9) Post Pulls in 1-1/4" diameter tubing available in 18", 36" and 72" lengths.
 - 10) Locking Ladder pull in 72" length shall be available with random SFIC core and dustproof floor strike receiver.
 - 11) Locks for 18" and 36" Post pulls shall be Adams-Rite 1851S with a 1-1/8" backset in aluminum doors, 1-1/2" backset for wood doors. Optional random key or SFIC housing with thumb-turn on inside of door.
 - 12) All hardware is available in Satin Chrome US 26D or Black.

E. Snap-On Reusable Base

This system shall include a rigid vinyl base, or optional aluminum base, matching in height to the furniture system base color, style and height that engage positively to the floor track throughout the partition run. Glue-on base is not acceptable.

10. EXECUTION

A. The modular wall system shall interface readily with varying building conditions as shown on Drawings without requiring the manufacture of special fittings or modules that may require the Owner to maintain special inventories.

B. Modular walls shall be installed over existing floors, anchored to suspended ceiling and shall connect with existing masonry walls and new gypsum board walls.

C. Ceiling runners shall be fastened to the suspended ceiling grid with No. 6SMS or another approved fastener. All splices and intersections shall be held tight and aligned by manufacturer supplied concealed installation clips. The runner shall be drilled in the field to provide access to wall panels for electrical drops.

D. Provide floor runners with optional carpet grippers which secure it against lateral movement. No additional attachments are required except at door frames.

E. Intersections of modular walls shall be structurally sound without defacing the intersected surface by drilling or cutting.

F. Electrical

1) A UL 183 listed 8-wire 4-circuit electrical system must be available standard. A power adapter connecting cable must be available to connect manufacturers UL listed furniture system electrical system with identical capacities and circuitry.

2) Custom UL Listed Hardware BOX for Vertical Power access inside of in-line 180-degree spacers.

11. PERFORMANCE CHARACTERISTICS

A. Fire Protection - The system's assembled panels shall have a maximum Flame Spread Index of 145 and maximum Smoke Developed Index of 165 per ASTM E84 and shall have a minimum Class "C" classification per NFPA 101 Life Safety Code

B. Acoustics - The system's assembled panels shall have minimum STC per ASTM E90 as follows:

a. GLASS PANELS: 30 STC (minimum)

b. SOLID ½" INSERTS: 40 STC (minimum)

c. SOLID ¾" OUTSERTS: 42 STC (minimum)

C. Wall shall have been tested and certified as sustaining 5 pounds per square foot (minimum) transverse loading, with panel deflection no greater than 1/120th of the vertical span (in inches), in conformance with ASTM Procedure E-72

12. PREPARATION FOR INSTALLATION

Do not begin erection of modular walls until building is suitably enclosed to provide complete protection from weather and until temperature within the building can be maintained at a constant minimum of 55° F.

13. INSTALLATION

A. Install partitions after permanent partitions, floor coverings, suspended ceiling panels, data/communications cable, and final electrical connections.

B. Install modular walls to be fully modular, rigid, level, plumb, and in alignment with components secured together in accordance with manufacturer's instructions. Partitions shall be clean and free from defects and ready for use.

C. Aluminum floor runners not over carpet shall be secured to the floor as required by the use of power-driven pins or other approved fasteners. Where partitions are installed over carpeting and carpet grippers are used on the floor runner, fasteners shall only be required at door openings.

D. Where the space is greater than 4", provide fillers between the modular wall and the column. Where columns occur close to modular wall a wall start shall be applied to the modular wall and the column.

F. Install continuous and positive seal to prevent light and sound transmissions at partition contacts with floor, ceiling, wall, and other abutting surfaces.

G. Repair damaged or defaced work or replace with new work, as acceptable to the Architect. Completely refinish defaced partition components with factory-finish materials or replace defaced components.

H. Adjust hardware and leave doors in proper operating condition.