

Pre-Engineered Modular Shelters Specification

Part I -- GENERAL

A. Description

1. This Specification covers the design, fabrication and installation of pre-engineered modular shelters.
2. The shelter shall be a completely enclosed, personnel enclosure to protect against the environmental elements, and is intended to serve as a smoker's shelter, or in general as a protection from inclement weather.

B. Manufacturer's Qualifications

Shelter framework, wall and roof paneling, equipment and related hardware shall be furnished by a manufacturer regularly engaged in the manufacturing of such products for a minimum of five (5) years, and shall be of premium grade material, construction, and finish.

C. Submittals

The following drawings and documentation will be furnished:

1. Shop drawings shall show wall and roof panels; details of materials, fabrication, and assembly; framing profiles; fastener types and locations, flashing, and seal details if applicable.
2. Erection drawings: Provide instructions and drawings, and develop erection procedures to enable field installation or repair of shelter.
3. Manufacturer's literature and data provide manufacturer's information for wall and roof panels, and all accessories and equipment furnished.

D. Applicable Publications

The publications listed below form a part of this specification.

1. Federal Specifications (Fed. Spec.):
 - a) QQ-A-200/9C(1)....Extruded aluminum members 6063-T5
 - b) HH-I-521B....Insulation board, Thermal, Semi-Rigid Polyurethane.
 - c) TT-S-001657....Sealants, Type 1.
2. American Society for Testing Materials (ASTM):
 - a) C-920-79....Elastomeric Joint Sealants Type S, Class 12, Grade NS
 - b) C-518....Insulation Board, Semi-Rigid Polyurethane.
 - c) E-84....Standards method of test for surface burning characteristics of building materials.
3. American National Standards Institute (ANSI): ANSI A58.1....Gravity and Lateral Loads Design.
4. Uniform Federal Accessibility Standards: FED-STD-795, 4/1/88....4.13 Door Accessibility.
5. The Aluminum Association (AA): Designation System for Aluminum Finishes (March 1973).
6. International Conference of Building Officials, Uniform Building Code.
7. Public Law 101-336: Americans with Disabilities Act of 1990 (ADA).
8. Public Law 102-585: Veterans Health Care Act of 1992, Sec. 526, Attachment A: "Design Requirements for Detached Smoking Areas."

Part II -- PRODUCT

A. Framing

1. The shelter framework shall be fabricated using 6063-T5 extruded aluminum members (Fed. Spec. QQ-A-200/9C(1)).
2. Extrusion shapes shall be engineered to provide a framework of adequate structural integrity to satisfy the uniform building code (UBC), and to meet the requirements for snow, wind, and seismic loading for the location(s) being considered.
3. The framework shall be assembled with cadmium or zinc-coated fasteners to prevent rusting or electrolytic interaction with framing members.
4. Shelter framing components, and the method of fastening them to the supporting foundations shall be capable of withstanding lateral loads per ANSI A58.1, the UBC, or applicable local building codes, whichever is more stringent.

B. Wall, Roof, Window, Door Panels

1. Wall and roof panels shall be fabricated of 6mm bronze polycarbonate-structured sheets (PCSS) and secured to the framing structure to provide a safe weather-protective enclosure.
2. Wall and roof insulated panels shall have an insulation value of a minimum of R-6 in accordance with Fed. Spec. HH-T-21B. (option)
3. The wall and roof panels shall also be capable of transmitting 80% of the visible light from the sun, have a high impact rating of a least 200 ft-lbs. without fracturing, and exhibit a flame spread classification (per ASTM E-84) of class 1 with a flame spread of 10 or less and a smoke density of 180 or less.
4. Wall modules designated to have operable windows by contract drawings, will be equipped with single-hung sliding window panels and fixed screens.

5. Door(s) shall be manually-operated 38" swinging or sliding door(s). Handles, and pulls shall be ADA approved, easy operated hardware.
6. Sliding doors shall require no more than 5 pounds of force to operate (FED-STD-795-22.2N) to fully open, and operating hardware shall be exposed and usable from both sides.
7. Thresholds shall not exceed 3/8 in. (9.5mm) in height and conforms with ADA requirements.
8. Wall and roof panels shall be sealed as required to provide a water-proof barrier in compliance with fed. spec. II-S-001657 using ASTM C-920-79 sealants.

C. Finish

Extruded aluminum framework shall be electrostatically painted in accordance with the Aluminum Association standard finish AA-R3X.

D. Guarantee

Materials and workmanship shall be guaranteed for one year, starting on the day of acceptance.

Part III -- ERECTION

A. Delivery

The shelter unit shall be shipped in modular form, with detailed written and video instructions for installation.

B. Erection

The manufacturer shall provide erection instructions complete with diagrams. Erection shall be performed by a representative. The manufacturer shall guarantee the installation for a period of one (1) year from the date of acceptance.

C. Protection and Cleaning

Protect panels and other components from damage during shipping and erection, and until project is accepted by the purchasing organization representative.

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