

SECTION 10 73 43

SHELTERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Smoking Shelters

1.3 REFERENCES

- A. Federal Specifications (Fed. Spec.):
 - 1. QQ-A-200/9C(1)... Extruded aluminum members 6063-T5
 - 2. HH-I-521B... Insulation board, Thermal, Semi-Rigid Polyurethane.
 - 3. TT-S-001657... Sealants, Type 1.
- B. American Society for Testing Materials (ASTM):
 - 1. C-920-79... Elastomeric Joint Sealants Type S, Class 12, Grade NS
 - 2. C-518... Insulation Board, Semi-Rigid Polyurethane.
 - 3. E-84... Standards method of test for surface burning characteristics of building materials.
- C. American National Standards Institute (ANSI): ANSI A58.1... Gravity and Lateral Loads Design.
- D. Uniform Federal Accessibility Standards: FED-STD-795, 4/1/88... 4.13 Door Accessibility.
- E. The Aluminum Association (AA): Designation System for Aluminum Finishes (latest edition)
- F. International Conference of Building Officials, Uniform Building Code.
- G. Public Law 101-336: Americans with Disabilities Act of 1990 (ADA).

1.4 DESIGN REQUIREMENTS

- A. Basic Wind Speed: *100 mph.*
- B. Exposure Category: *B*
- C. Basic Snow Load: *20 psf.*

1.5 SUBMITTALS

- A. Specified Manufacturer: Product shall be as manufactured by Duo-Gard Industries, Inc., Canton, MI. Requests for approval of other brands shall be submitted to owner 14 days prior to bid date and shall be accompanied by complete product data, drawings, and references, as described below. Samples submitted upon request.
- B. Product Data: Submit manufacturer's product data, including materials, components, finish and all accessories and equipment furnished.
- C. Shop Drawings: Submit manufacturer's shop drawings, including plans, elevations, sections and details, dimensions, anchorage, fasteners and locations, flashing and seal details if applicable, finish, and options.
- D. Erection Drawings: Submit manufacturer's instructions and drawings, and develop erection procedures to enable field installation and repair.
- E. Manufacturer's Project References: Submit list of completed projects including project name and location and type of shelters manufactured.
- F. Warranty: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Continuously engaged in Shelter manufacturing with a minimum of 10 years successful experience.
 - 2. Able to demonstrate successful performance on comparable projects.
 - 3. Responsible for all components, including structural design.
- B. Installer's Qualifications:
 - 1. Authorized by manufacturer to install Shelters.
 - 2. Trained by manufacturer' standard training methods and policies.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, and location of installation with detailed written instructions for installation.
- B. Storage: Store materials in a clean, dry area indoors in accordance with manufacturer's instructions.

1.8 WARRANTY

- A. Warranty Period: One year starting on date of substantial completion.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Duo-Gard Industries Inc., 40442 Koppernick Road, Canton, Michigan 48187. Phone (734) 207-9700. Fax (734) 207-7995. Web Site www.duo-gard.com. E-Mail info@duo-gard.com.

2.2 GLAZING

- A. Storefront framing and glazing system shall be utilized. Kawneer, Tubelite, Ramco Metals, or similar. All extruded aluminum to be Class I Anodized. Framing shall be minimum 4 ½" x 4 ½" and 2" x 4 ½" (for 1" insulated glazing). All framing shall be gasketed or sealed for weather protection. All connections shall be with stainless steel fasteners. Sill plates and closed back header tubes shall be used in all needed locations.
- B. Window panels shall be: 1" insulated and tempered glass panels (Choose), tint: Clear.
- C. Wall and roof panels shall be sealed as required to provide a water-resistant barrier in compliance with Fed. Spec. II-S-001657 using ASTM C-920-79 sealants.

2.3 STRUCTURAL FRAMING

- A. The shelter framework (columns, sills and headers) shall be fabricated using 6063-T5 extruded aluminum members Fed. Spec. QQ-A-200/9C(1). 6061-T6 and 6005-T5 alloy/temper shall be used where required.
- B. 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.
- C. Roof structure and other framing members shall be 2 ½" x 2 ½" x 1/8" thick square and 1.5" x 2.5" x 1/8" thick extruded aluminum tubes. Other framing members to be used as required.
- D. The framework shall be assembled with only stainless steel and aluminum fasteners to prevent rusting or electrolytic interaction with framing members.
- E. 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.

2.4 MATERIALS

- A. Roof sheathing shall be: standing seam metal – Gable Roof Design. Standing seam metal to be: 24 ga. galvalume-coated standing seam steel panels, with 3-coat Kynar 500 paint on exterior, white primer on underside. Color: from 30 standard: TBD (choose), All supporting loads listed herein.
- B. Joint Sealant:
 - 1. Factory-Applied Sealant: Gunnable, nonhardening, elastomeric sealant. ASTM C 920, Type S, Class 12, Grade NS. Fed Spec TT-S-1657, Type 1.n.

2. Field-Applied Sealant: Approved by shelter manufacturer. As specified in Section 07920.

C. Field Fasteners:

1. Comply with shelter manufacturer's instructions for fastener types, quantities, and usage.

D. Free standing aluminum benches with backrest 2@8' and 1@16' – color to match dark bronze anodized aluminum framing.

2.5 COLOR AND FINISH

A. Extruded aluminum framework shall be electrostatically painted, powder-coated, or Class I anodized (choose) in accordance with the Aluminum Association. Color: Dark Bronze

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas to receive shelters. Notify Architect of conditions that would adversely affect installation. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Ensure location to receive shelter is clean, flat, level, plumb, square, accurately aligned, and correctly located.

3.3 INSTALLATION

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

3.4 CLEANING

A. Clean shelters in accordance with manufacturer's instructions.

B. Clean inside and outside of shelters immediately after installation.

C. Do not use harsh cleaning materials or methods that would damage the metal finish or glazing.

3.5 PROTECTION

A. Protect installed shelters from damage during construction.

END OF SECTION