



SECTION 08 56 53 - SECURITY WINDOWS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings: Illustrate products, installation, and relationship to adjacent construction.
 - 2. Product Data: Manufacturer's descriptive data and product attributes.
 - 3. Samples: [Selection samples.] [Verification samples.]
- B. Informational Submittals:
 - 1. Certificate of Compliance: Certification that installed products meet specified design and performance requirements.

1.2 QUALITY ASSURANCE

- A. Installer Qualifications: Firm specializing in work of this Section with minimum [2] [] years' experience.

1.3 WARRANTY

- A. Manufacturer's one year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by QuikServ Inc., 11441 Britmoore Park Drive, Houston, TX 77041, Toll-Free: 800-388-8307, Tel: 713-849-5882, Fax: 713-849-5708, www.quikserv.com, email: sales@quikserv.com.
- B. Substitutions: [Refer to Division 01.] [Not permitted.]

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: System design to be performed by qualified professional engineer licensed in State of [].
- B. Structural Performance: Design and size components to withstand the following load requirements without damage or permanent set:
 - 1. Design Wind Loads: [As indicated on Drawings.] [].
 - 2. Movement: Ambient temperature range of [120] [] degrees F and a surface temperature range of [160] [] degrees F.
 - 3. Uniform structural loading: No glass breakage or permanent damage to fasteners or system components, tested to ASTM E330/E330M at [1.5] [] times design pressure.
- C. Ballistics Resistance: Installed bullet-resistant glazing shall withstand ballistic impact loads and forces without damage to the glazing beyond that allowed by referenced standards.
 - 1. Ballistic Level: Pass UL 752 Level [1] [2] [3] [4] [5] [6] [7] [8].

**** OR ****

D. Blast Resistance:

Design Parameters vary for Project and should be determined by a qualified blast consultant based on the Owner's and tenant's requirements.

Retain "Hazard Rating" or "Performance Condition" Subparagraph below if blast resistance is required. Obtain peak pressure, impulse or duration, and hazard and protection criteria conformance from the building team's engineers and blast or security consultants calculations.

1. Hazard Rating: [None] [Very low] [Low] [Medium] [High] according to ASTM F 1642.
2. Peak Pressure: [].
3. Positive Phase Impulse: [].

E. Storm Resistance: Pass FEMA 361-15 and ICC 500-14 testing.

F. Forced-Entry Resistance: Pass ASTM F588.

G. Water Penetration: No uncontrolled water leakage, tested to ASTM E331 at minimum static air pressure differential of [6.24] [10.0] [] PSF.

2.3 INTERIOR OPERABLE SECURITY WINDOW SYSTEM

A. Type: Non-thermal, factory fabricated, factory-glazed, factory finished windows complete with [blast-resistant] [and] [ballistic-resistant] glazing infill and operating hardware.

1. Product: Model USAW-200.

Framing will accommodate glazing from 1/4 inch to 2-3/8 inch thickness.

2. Framing: 1-1/4 x 3-3/4 inch size with minimum 1/8 inch wall thickness, designed to receive [1] [] inch glazing retained mechanically with gaskets on four sides.
3. Operation: Casement window; project in.

2.4 INTERIOR FIXED SECURITY WINDOW SYSTEM

A. Type: Non-thermal, factory fabricated, factory finished windows for field-glazing with [blast-resistant] [and] [ballistic-resistant] glazing infill.

1. Product: Model USAW-300.

Framing will accommodate glazing from 1 inch to 2-3/8 inch thickness.

2. Framing: 1-1/2 x 4-1/8 inch size with minimum 1/8 inch wall thickness, designed to receive [1] [] inch glazing retained mechanically with gaskets on four sides.

2.5 GLAZING

A. Thicknesses indicated are minimums. Provide ballistics-resistant glazing in thicknesses as necessary to comply with requirements indicated.

Retain glazing types below to suit Project.

B. Ballistic-Resistant Glazing: Pass UL 752 Level [1] [2] [3] [4] [5] [6] [7] [8].

Retain desired subparagraph below. Abrasion resistant surface coating below is optional for Levels 1 and 2; standard for Level 3. Verify coating protections available for other Levels with manufacturer.

1. Level 1 Form: [Laminated polycarbonate/acrylic/polycarbonate] [Acrylic sheet] [Glass-

- 2. Level 2 Form: [Laminated polycarbonate/acrylic/polycarbonate] [Acrylic sheet] [Glass-clad polycarbonate per ASTM C1349] [All-Glass]
 - 3. Level 3 Form: [Laminated multi-ply polycarbonate] [Acrylic sheet] [Glass-clad polycarbonate per ASTM C1349] with an abrasion resistant surface coating.
 - 4. Level [] Form: [Laminated glass per ASTM C1172] [Glass-clad polycarbonate per ASTM C1349] [Polycarbonate sheet] [Laminated polycarbonate] [].
- C. Ballistic-Resistant Glazing: Pass NIJ Standard 0108.01 Type [II-A] [II] [III-A] [III].
 - D. Blast-Resistant Glazing: Pass GSA Level [C] [D].
 - 1. Form: [Laminated glass per ASTM C1172] [Glass-clad polycarbonate per ASTM C1349] [Polycarbonate sheet] [Laminated polycarbonate] [].

2.6 ACCESSORIES

- A. Glazing Accessories: Specified in Section [08 80 00 - Glazing] [08 88 39 Pressure-Resistant Glazing] [08 88 53 - Security Glazing] [08 88 56 Ballistics-Resistant Glazing].
- B. Anchors: Series 316 stainless steel.
- C. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts, complying with ASTM A 123/A 123M or ASTM A 153/A 153M.
- D. Exposed Flashing: Aluminum sheet per Div. 07 Section "FLASHING AND SHEET METAL"; finish to match framing members.
- E. Normally retain 1st option below.
- F. Concealed Flashing: Dead-soft, 0.018-inch-thick stainless steel, ASTM A 240 of type recommended by manufacturer.
- G. Framing Sealants: Manufacturer's standard.
- H. Joint Sealants: For installation at perimeter of framing, as specified in Section 07 92 00.

2.7 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - 1. Extrusions: ASTM B 221.
 - 2. Sheet: ASTM B209.

Level 1 – 3 is all aluminum, requiring no steel inserts. Level 4 – 8 require steel inserts.

- B. Steel Reinforcement: Manufacturer's standard; galvanized or zinc-rich primed finish.
 - 1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - 2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.

2.8 FINISHES

Anodized finish is standard. Retain below for anodized finish. Consult manufacturer for available tints.

- A. Anodized Aluminum Finish: AAMA 611, Architectural Class II anodized, [clear.] [dark bronze.] [].

**** OR ****

PVDF (Kynar) Finish below is optional. Consult manufacturer for available colors. Superior-Performance finish contains 70% PVDF resin. High-Performance finish contains 50% PVDF resin.

- B. [Superior] [High]-Performance Organic Finish: 2-coat PVDF fluoropolymer finish complying with [AAMA 2605] [AAMA 2604] and containing not less than [70] [50] percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 1. Color: [Stock color to be selected from manufacturer's full color range.] [Custom color as directed.]

**** OR ****

Powder coat finish is optional. Retain below for a baked enamel coating system. Consult manufacturer for available colors.

- C. Pigmented Organic Aluminum Finish: AAMA 2603 thermosetting polyester/epoxy powder coating, [stock color to be selected from manufacturer's full color range.] [custom color as directed.]

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved Shop Drawings.

**** OR ****

Retain above for factory glazed USAW-200 windows, Retain below for field-glazed USAW-300 windows.

- B. Install framing and glazing in accordance with manufacturer's instructions and approved Shop Drawings and Section [08 80 00 - Glazing] [08 88 39 Pressure-Resistant Glazing] [08 88 53 - Security Glazing] [08 88 56 Ballistics-Resistant Glazing].
- C. Installation Tolerances: Comply with the following non-accumulating maximum tolerances:
 - 1. Plumb: 1/8 inch in 12 feet; 1/4 inch over total length.
 - 2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
 - 3. Maximum misalignment of members abutting end to end: [1/32] [] inch.
 - 4. Sealant space between system and adjacent construction: As indicated but not greater than [1/2] [] inch or less than [1/4] [] inch.

END OF SECTION