

SECTION 085653

SECURITY WINDOWS (BR 250 Fixed Window and Curtain Wall)

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Aluminum bullet and blast resistant interior and exterior window frames.

1.2 RELATED DOCUMENTS

- A. Drawings, and general provisions of the Contract.

1.3 RELATED SECTIONS

- A. Section 088856 – Ballistic-Resistant Glazing
- B. Section 013300 – Submittal Procedures

1.4 DEFINITIONS

- A. AAMA: American Architectural Manufacturers Association
- B. ASTM: American Society for Testing and Materials.
- C. UL: Underwriters Laboratory

1.5 PERFORMANCE REQUIREMENTS

- A. Ballistics-Resistance Performance Requirements: Provide security window frames identical to those tested for compliance with requirements indicated, and as follows.
 - 1. Security window and window assemblies will meet or exceed the requirements of UL 752 Level III.
 - 2. Testing is conducted by H.P. White Laboratory or an approved equivalent independent testing laboratory.
 - 4. Proof of certification is available upon request.
 - 5. Testing conforms to Underwriters Laboratory UL 752 Ballistic Standards.
- B. Blast Resistant Performance and Design Requirements: Provide window assemblies and the anchorage analysis that comply with requirements indicated and as follows.
 - 1. Security windows will be calculated to meet: _____
 - 2. Security window will comply with design build blast drawings and calculations.

3. A detailed engineered blast calculations by a qualified blast engineer to substantiate that the system design and anchorage meets or exceeds the minimum performance required.

1.6 SUBMITTALS

- A. Design Calculations: Submit design analysis and calculations verifying conformance to specified blast criteria.
- B. Shop Drawings: Provide elevations indicating rough openings requirements and details for field installed assemblies.
- C. Qualification Data: Submit qualifications verifying years of experience; include list of completed jobs having similar scope of work, identified by name, location, date contact names and phone numbers.
- D. Product Data: Provide manufacture's data sheets on all products used.
- E. Selection Samples: Provide two product samples for each finish specified.
- F. Verification Samples: Provide sample for product specified, minimum size 6 inches (150 mm) square, and representing actual product.

1.7 QUALITY ASSURANCE

- A. Provide test reports from a nationally recognized testing laboratory certifying the UL rating on product.
- B. Drawings and specifications are based on Action Bullet Resistant's Model BR 250 Fixed Window/Curtain Wall.
- C. Installer Qualifications: An experienced installer who has completed similar design, material and extent to this project.
- D. Manufacture's facility will be made available during production for inspection of windows by customer's representative to ensure compliance of products with drawings and specifications.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Product will be securely crated to prevent damage during shipping. Each crate will be identified by door number and/or elevation. Packing list will identify all contents of crate.
- B. Frames are supplied fully assembled or K-D depending on size.
- C. Verify contents of crate within five days of receipt. If crates are to be stored for long periods due to construction delays, place in a dry warehouse with moderate temperatures.

D. When handling crates use forklift or pallet jack.

1.9 PROJECT CONDITIONS

- A. Field Measurements: Verify security window openings by field measurements before fabrication and indicate measurements on Shop Drawings.
- B. Established Dimensions: Where field measurements cannot be made without delaying the work, establish openings and proceed with fabrication without field measurements using held dimensions. Coordinate wall construction to ensure that actual openings dimensions correspond with held dimensions.

1.10 WARRANTY

- A. Contractor warrants installation for a period of one year and assumes full responsibility for installation of the system, which includes the window, window system, glass, anchorage, setting, sealing, flashing, etc, as it relates to air, water and structural adequacy as required in the shop drawings and specifications.
- B. Manufacture warrants products for period of one year from the date of customer receipt.

PART 2 – PRODUCTS

2.1 MANUFACTURE

- A. Acceptable Manufacturer: Action Bullet Resistant, Inc., located at 263 Union Blvd. West Islip, NY 11795: Toll Free Tel. 800-962-8088; Tel 631-422-0888; Fax Tel 631-422-4498; Email info@actionbullet.com; Web www.actionbullet.com

2.2 PRODUCT TYPE

- A. Security windows available in fixed window or window system.

2.3 MATERIAL

- A. Aluminum Extrusions: Aluminum alloy and temper – 6005-T5. Ultimate tensile strength of 37.7 ksi, and shear strength of 29.7 ksi.
- B. Steel Blast Reinforcement: (Steel straps and anchors)
 - 1. Steel plates, shapes and bars ASTM A-36
 - 2. Seamless steel structural tubing ASTM A-500.
- C. Silicone: Structural silicone GE SCS 1000 complies with ASTM-C-920-05.
- D. Glass and Glazing: See Section 088856.

E. Setting blocks – Neoprene 80-85 durometer ASTM-D-2000

2.4 FABRICATION

- A. Frames are fully fabricated and shipped to customer for field installation.
- B. Fasteners where exposed will be stainless or other non-corrosive material.
- C. Window and window systems frames are 2 ½” x 4 ½” with 3/16” minimum wall thickness on vertical mullion and 3/32” minimum wall thickness on horizontal mullion.
- D. Window and window system to have a screw spline system with tight hairline joints where the horizontal mullion meets with vertical mullions.
- E. Window and window systems are glazed from the outside.
- F. Glazing pocket to be 1” deep for proper bite.

2.5 FINISH

A. Exposed surfaces to be free of scratches and other serious blemishes. Anodic finishes are electrolytically deposited Class II finish. Manufactures standard finish:

- 1. Clear Anodize – ASTM-B-137-95
 AAMA 608.1
- 2. Dark Bronze Anodize - ASTM-B-137-95
 AAMA 608.1

B. Painted Finishes:

- 1. 70% Kynar-Base AA-M10- AAMA 2605
 Duranar or Fluoropon C41-RX ASCA 96
- 2. Tiger Drylac RAL#_____

PART 3 – EXECUTION

3.1 EXAMINATION

- A. With Installer examine substrates, areas, and conditions for compliance with the requirements for installation tolerances and other conditions affecting functionality and performance of security window systems.
 - 1. Examine rough-in opening for built-in and embedded anchors to verify actual locations of connections before installation.
 - 2. Prepare a written report, endorsed by the installer, listing conditions detrimental to the functionality and performance of security window systems.
 - 3. Examine and inspect built-in and cast-in anchors installations to verify that they comply with requirements. Prepare inspection reports. If removal and replacement is

required by inspection, re-inspect after repairs are made and document in inspection report.

4. Clean surfaces thoroughly prior to installation.

3.2 INSTALLATION

- A. Window systems shall be installed in their correct locations, set level, square and plumb in alignment with other work and substrates, in accordance with manufactures instructions, approved shop drawings and accepted industry standards. All joints between windows and rough opening shall be sealed using sealant to ensure a weather tight installation.
- B. Installer shall take special care to ensure that impact side of glass faces the threat axis.

3.3 FIELD QUALITY CONTROL

- A. Inspect installed items to ensure compliance with requirements.
- B. Protect installed items until completion of project.

END OF SECTION 085653