(**Specifier Note**: The purpose of this guide specification is to assist the Specifier in correctly specifying bullet and blast resistant aluminum framing and glass assemblies and their installation as windows and storefronts.

The Specifier needs to edit this guide specification to fit the needs of each specific project. References have been made within the text of the specification to MasterFormat section numbers and titles. The Specifier needs to coordinate these numbers and titles with sections included for the specific project.

Throughout the guide specification, there are Specifier Notes to assist in the editing of the file. Brackets have been used to indicate when a selection is required. Contact an Insulgard representative for further assistance with appropriate product selections)

**SECTION 08 43 33.13 – SECURITY STOREFRONTS**

**Insulgard TH600 Bullet [and Blast] Resistant Architectural Aluminum Framing**

1. GENERAL
	* + 1. SECTION INCLUDES
				1. Bullet **[and] [Blast]** ResistantAluminum Storefront Framing
			2. ACTION SUBMITTALS
				1. Refer to Section **[01 33 00 Submittal Procedures] [Insert section number and title]**.
				2. Product Data: For each type of framing and glazing including manufacturer recommended installation instructions.
				3. Shop Drawings: Include plans, elevations, sections, details, attachment to other work [**and glazing details for field-glazed units**].
				4. Samples: For each exposed finish.
			3. INFORMATIONAL SUBMITTALS
				1. Product Test Reports: Indicating compliance with requirements
				2. **[Calculations: Indicating assembly complies with the performance criteria for Blast Resistance]**
				3. Warranty: Sample of finish warranty
			4. CLOSEOUT SUBMITTALS
				1. Refer to Section [**01 78 00 Closeout Submittals] [Insert section number and title]**.
				2. Maintenance data.
			5. QUALITY ASSURANCE

(**Specifier Note**: Depending upon the scope of the work it may be appropriate to require the installation of a mock-up at the project site, which can either be part of the work or separate. Indicate the size of mock‑up to be constructed.)

* + - * 1. Mock-up: Install framing assembly at project site. Obtain Architect’s approval prior to proceeding with installation of remaining storefront. Accepted mock-up [**may**] [**may not**] remain as portion of final work.
			1. DELIVERY, STORAGE AND HANDLING
				1. Refer to Section **[01 60 00 Product Requirements] [Insert section number and title].**
			2. WARRANTY

(**Specifier Note**: The 5 year finish warranty applies to the Class I anodic finishes and the 10 year applies to the 70% PVDF coating finish.)

* + - * 1. Finish Warranty: Manufacturer’s warranty against deterioration of factory finishes for the period of **[5] [10]** years from the date of Substantial Completion.
1. PRODUCTS

(**Specifier Note**: Product information is proprietary to Insulgard Security Products. If additional products are required for competitive procurement, contact Insulgard, Inc. for assistance in listing competitive products that may be available.)

* + - 1. MANUFACTURED UNITS
				1. Basis of Design: Insulgard TH600 Bullet and **[Blast]** Resistant Architectural Aluminum Framing by Insulgard Security Products; Phone 800.624.6315; website [www.insulgard.com](http://www.insulgard.com)

Subject to compliance with requirements, manufacturers of products of equivalent design may be acceptable if approved in accordance with [**Section 01 25 00 Substitution Procedures**] [**Insert section number and title**].

* + - * 1. Description

Factory fabricated framing constructed from either 6105-T5 or 6005-T5 extruded aluminum with integral weep design to allow water to vent to the exterior along horizontal members.

Dimensions:

Head, Jamb, Sill, Mullion and Intermediate Horizontal Members: 2-1/2 inches by 6 inches.

* + - 1. PERFORMANCE CRITERIA
				1. Ballistic Resistant: Level **[3]** **[4] [5] [8]** in accordance with UL 752 – Testing for Ballistic Resistance for the complete assembly including framing, glazing and panels.
				2. **[Blast Resistant]**

**[GSA Building Classifications [C ] [D ] Blast Resistant in accordance with GSA PBS-P100 Facilities Standards]**

**[Low Level Blast Resistant in accordance with current UFC 4-010-01 Unified Facilities Criteria (UFC) DOD Minimum Antiterrorism Standards for Buildings]**

* + - 1. FABRICATION
				1. Tolerances: All joints and connections shall be tight, providing hairline joints and true alignment of adjacent members
			2. FRAMING FINISH
				1. Factory-applied finish:

(**Specifier Note**: SELECT the project specific finish from the following. Baked Enamel may also be available but may require minimum quantities.)

[**Clear Anodic Finish**]: Architectural Class I, clear coating AA-M10C22A41 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum"

[**Color Anodic Finish**]: Architectural Class I, color coating AA-M10C22A42/A44 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum".

Color: Dark Bronze.

[**PVDF-Based Coating**]: Fluoropolymer finish containing minimum 70 percent PVDF resins, in accordance with AAMA 2605 “Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Aluminum Extrusions and Panels”

Coats: [**two**] [**three**] [**four**] coat system,

Color: [**Insert color**] [**custom**] [**to be selected from manufacturer's full color range**].

* + - 1. GLAZING

(**Specifier Note**: SELECT glazing based on threat level and Architect’s preference. Ballistic Resistant Glazing material will also meet blast performance criteria. Include the requirement for calculations indicated in Informational Submittals when both ballistic and blast performance is required. If blast resistance is not required it is more cost effective to not require the calculations. )

* + - * 1. Ballistic **[and Blast]** Resistant Glazing Material:

Ballistic Resistance Level 3, Insulating: BALULN25 IGU

Ballistic Resistance Level 4 **[Insulating]**: **[BALULN31] [BALULN31IGU]**

Ballistic Resistance Level 5 **[Insulating]**: **[BALULN32] [BALULN32IGU]**

Ballistic Resistance Level 8: BALULN55

(**Specifier Note:** Utilize Blast Resistance Glazing Material when specific project does not require ballistic resistance in addition to blast resistance.)

* + - * 1. Blast Resistant Glazing Material:

Blast Resistance **[GSA Level C] [UFC Very Low Level ]**: NBRBLST-4

Blast Resistance **[GSA Level D] [UFC Low Level]**: NBRBLST-10

* + - 1. ACCESSORIES
				1. Anchors: Fully concealed in accordance with requirements of delegated design requirements
1. EXECUTION
	* + 1. PREPARATION
				1. Verify field dimensions of opening prior to fabrication of windows.
				2. Coordinate structural requirements to ensure proper attachment and support.
			2. INSTALLATION
				1. Install windows in accordance with manufacturer's recommendations and approved shop drawings.
				2. Provide required support and securely fasten and set windows plumb, square, and level without twist or bow.
				3. Apply sealant in accordance with window and sealant manufacturer's recommendations as indicated in installation instructions. Wipe off excess, and leave exposed sealant surfaces clean and smooth
			3. PROTECTION
				1. Clean and protect windows from damage during construction operations. If damage occurs, remove and replace as required to provide windows in their original, undamaged condition.

END OF SECTION