**SECTION 08 85 00**

**TSS BR TALK THRU - HOLE AND BACKER**

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

The Specifier must 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 must 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 a TSS representative for further assistance with appropriate product selections.)

**PART 1 - GENERAL**

* + - 1. SECTION INCLUDES
				1. Bullet resistant hole and backer voice port.
			2. REFERENCES
				1. Underwriters Laboratory UL 752-Standard for Bullet Resisting Equipment.
				2. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar.
				3. ASTM B 209/B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

1.3 ACTION SUBMITTALS

* + - * 1. Refer to Section[01 33 00 Submittal Procedures] [Insert section number and title].
				2. Product Data: Including manufacturer recommended installation instructions.
				3. Shop Drawings: Include plans, elevations, sections, details, attachment to other work.
				4. Samples: For each exposed finish.

1.4 INFORMATION SUBMITTALS

* + - * 1. Product Test Reports: Indicating compliance with requirements
				2. Warranty: Sample of finish warranty

1.5 CLOSEOUT SUBMITTALS

* + - * 1. Refer to Section [01 78 00 Closeout Submittals] [Insert section number and title].
				2. Maintenance data.

1.6 DELIVERY, STORAGE AND HANDLING

* + - * 1. Refer to Section [01 60 00 Product Requirements] [Insert section number and title].
				2. Deliver materials to the project site with the manufacturer’s UL Listed Labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer’s recommended limits.

1.7 WARRANTY

* + - * 1. Workmanship Warranty: All materials shall be warranted against defects for a period of[1] year for the date of receipt at the project site. Provide certificates of manufacturer’s standard limited warranty with closeout documents.
				2. Finish Warranty: Manufacturer’s warranty against deterioration of factory finishes for the period of [5] [10] years from the date of Substantial Completion.

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

**PART 2 - PRODUCTS**

2.1 MANUFACTURED UNITS

* + - * 1. Basis of Design:

Subject to compliance with requirements, provide products by the following:

Total Security Solutions, Inc., 935 Garden Lane, Fowlerville, MI 48836, 866 734-6277. Attn: Sales Department, sales@tssbulletproof.com. Web: [www.tssbulletproof.com](http://www.tssbulletproof.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].

2.2 BULLET RESISTANT TRANSACTION MODULES

* + - * 1. Voice Transmission

System Type: Hole and Backer Voice Port

Configuration: [round] [square] [arched].

Size: 6” diameter hole with 10” oversized backer

UL 752: Level 1 to 8 as selected in Glazing section.

2.3 FABRICATION

* + - * 1. Tolerances: All joints and connections shall be tight, providing hairline joints and true alignment of adjacent members

2.4 GLAZING

* + - * 1. Glazing shall be as shown on the drawings or as specified separately in [08 88 53 Security Glazing] [Insert section number and title].

(**Specifier Note**: SELECT glazing based on threat level and architect’s preferences from the following Bullet-Resisting Glazing Material Options. Remove glazing levels not used.)

Bullet Resistant Level 1

3/4" LP 750 Laminated

 3/4" All Poly 750

3/4" GCP 750 Glass Clad

1 1/4" Uncoated Acrylic

1 1/4" AR Coated Acrylic

Bullet Resistant Level 2

1" LP 1000 Laminated

 1" All Poly 1000

1 3/8” Uncoated Acrylic

1 3/8" AR Coated Acrylic

1.05” TSS-002 L/S Glass Clad

Bullet Resistant Level 3

1 1/4" LP 1250 Laminated

 1 1/4" All Poly 1250

1 1/4” TSS-003 L/S Glass Clad

Bullet Resistant Level 4, 5, 7, & 8

TSS-004 L/S, TSS-005 L/S, TSS 007 L/S & TSS-008 L/S

* + - * 1. Acrylic: All acrylic pieces shall meet or exceed UL 752 testing for ballistic integrity. All edges of acrylic shall be filed, sanded after cutting to remove rough edges and then polished until “water clear” transparent. All through holes for fasteners shall be 3/8” in diameter and be drilled clean. Chipped edges at through-hole exit points are not acceptable. All acrylic pieces shall be supported in the proper glazing channel designed for this purpose.
				2. Glazing gaskets:

Interior: Closed cell neoprene.

* + - * 1. Acrylic: All acrylic pieces shall meet or exceed UL 752 testing for ballistic integrity.

**PART 3 - EXECUTION**

3.1 PREPARATION

* + - * 1. Prior to beginning installation, verify that areas have been prepared as required by the Contract Documents and architectural drawings, and Shop Drawings have been approved.
				2. Notify Architect of any unsatisfactory preparation that is responsibility of others.
				3. Clean and prepare all surfaces per manufacturers recommendations as required for achieving the best results for the substrate under the project conditions.
				4. Do not begin installation of material until all unsatisfactory conditions have been resolved and approved by Architect.

3.2 INSTALLATION

* + - * 1. Do not begin installation until areas have been verified and surfaces properly prepared in accordance with Drawings.
				2. Install in accordance with manufacturer’s instructions and UL 752. Set all equipment plumb.
				3. Apply sealant in accordance with manufacturer's recommendations as indicated in installation instructions.
				4. Remove excess sealant and leave exposed surfaces clean and smooth

3.3 PROTECTION

* + - * 1. Clean and protect material from damage during ongoing construction operations. If damage occurs, remove and replace as required to provide voice ports in their original, undamaged condition.
				2. Inspection and Cleaning: Verify installation is complete and complies with manufacturer’s requirements.
				3. Provide final cleaning of product and accessories, removing excess sealant, labels and protective covers.
				4. Touch-up, repair or replace damaged products prior to Substantial Completion.

**END OF SECTION**