

Level I Architectural Specifications

SPECIFICATIONS FOR THE FABRICATION AND INSTALLATION OF BULLET RESISTANT SECURITY ENCLOSURES FOR NEW AND RETROFIT APPLICATIONS USING UL LEVEL I TESTED AND RATED COMPONENTS

Section A: Acrylic Glazing

- A1. Glazing shall be 1 1/4" thick bullet resistant acrylic sheet material with a mar resistant coating (Polycast SAR or equal).
- A2. All acrylic pieces shall meet or exceed UL test #752 for Level I Medium Power Small Arms (MPSA) and be labeled accordingly.
- A3. All edges of individual pieces shall have corners broken to prevent possible injury to customers and employees.
- A4. All edges of individual piece shall be sanded after cutting to remove rough edges and then polished until "water clear" transparent.
- A5. All through holes for fasteners shall be 5/16" in diameter and be drilled clean. Chipped edges at through hole exit points are not acceptable.
- A6. All acrylic pieces shall be supported in the proper glazing channel designed for this purpose (see aluminum, Section B), using the specified fasteners in the "Typical Details" drawing attached.
- A7. The acrylic glazing material shall be designed to provide maximum security while providing maximum sound transmission. Acceptable designs include the **Standard Baffle System, Arch Window System**.

Section B: Aluminum Components

- B1. Aluminum channel and clip material shall be 1 1/4"h x 1 9/16"w (with inside clear 1 5/16").
- B2. All aluminum channel and clip material shall be extruded using the alloy 6063-T5 or equal.
- B3. All aluminum channel and clip material shall be anodized clear using 202-R1 process, or standard architectural dark bronze.
- B4. All exposed aluminum edges shall be clean cut and have no burrs. Exposed corners shall be rounded and sanded.

Section C: Security Doors (Solid, Half Vision, or Clear) with Door Frames

- C1. Solid security doors shall consist of a 1 3/8" thick solid lumber core door laminated to a UL Level I ballistic fiberglass sheet.
- C2. Finish on solid security doors shall be plastic laminate material not less than 1/16" thick. The plastic laminate color or pattern shall match that of the existing décor as closely as possible. If a suitable finish is not readily available, the choice of finishes is at the discretion of bank personnel.
- C3. Optional view windows, 12" x 18", or 20" x 30", shall be the same Level I material as the acrylic enclosure. The window is to be affixed to the security door using no exposed fasteners.
- C4. Full security doors shall be built of a single sheet 1 1/4" thick acrylic, the same as used in the acrylic enclosure. Half vision security doors include the 1 1/4" acrylic sheet material and are covered on the lower half at the same height as the adjacent half wall.
- C5. Doors shall always swing out toward the threat, away from the protected area whenever possible.
- C6. Under standard circumstances, door hardware shall include:
 - 1.) A hydraulic automatic door closer of a size and type to adequately carry the weight of the security door (150 pounds), equal to International #5103 (ADA approval).
 - 2.) A hinge equal to Select Hinge SL-21 heavy duty for doors weighing up to 450 pounds. The hinge shall be extruded using the alloy 6063-T6 with polyacetal thrust bearings.
 - 3.) An anti-jimi device shall be mounted to the outside of the door.
 - 4.) A Unican ADA-compliant mechanical pushbutton lock with lever handle and five (5) pushbuttons. Finish shall be anodized clear or standard architectural dark bronze.
- C7. Tubular doorframes shall be 1 3/4" x 4" x 1/8" extruded aluminum, and anodized to match glazing channel material.
- C8. Doorframes shall be provided with an aluminum doorstop designed for this purpose on three (3) sides of the door.

Section D: Deal Trays (Recessed or Surface Mounted)

- D1. Standard industry deal trays are constructed of 1/8" stainless steel in a brushed stain finish. All joints are welded and ground smooth and all edges are finished smooth.
- D2. Deal trays shall be securely fastened to the counter millwork with the fasteners hidden and inaccessible.
- D3. Deal trays are 8" from front to rear. Surface mounted trays are 2" in height and are standard for retrofit applications. Recessed trays are 1 1/2" in depth and are typical for new millwork construction. Deal tray width is determined by the deal area width. If the counter has no designated deal area, the trays shall be at least 14" in width.

Section E: Bulk Package Exchange Units (PE's)

- E1. PE's shall be manufactured using the same acrylic materials as the enclosure glazing.
- E2. PE's shall be a separate and single modular unit. The unit shall have two (2) doors for front and rear access. The PE shall be provided with a mechanical interlock device to prevent both doors from opening at the same time.
- E3. All edges of the PE shall be finished and polished as described in Section A: Acrylic Glazing.
- E4. The base of the PE shall be fabricated with a black plastic laminate finish.
- E5. Both doors of the PE shall be hung on a plated continuous hinge to accommodate the door weight.
- E6. If the PE is located through an acrylic panel, the opening in the panel shall match the size of the unit and those edges shall be polished per Section A: Acrylic Glazing. It shall not be acceptable to use aluminum channel material to edge the acrylic opening around the PE.
- E8. The PE shall be security fastened to the counter millwork using fasteners hidden and unacceptable.
- E9. The location of the PE is at the discretion of the bank personnel.

Section F: Louvers

- F1. Louvers are installed to add height to the acrylic barrier to prevent vaulting of the acrylic. Louvers are not a ballistic rated product.
- F2. Louvers shall be constructed of 1/2 " thick non-secure acrylic sheet material, and will feature 1/2 "h x 18"w slotted openings on 2" centers, in an overlapping pattern.
- F3. The louver systems can range in overall height between six inches (6") and six feet (6'0"). Louver systems are typically self-supporting or can be attached to the ceiling.

Section G: Counter/Wall Protection

- G1. Retrofit Applications: UL Level I tested and rated ballistic fiberglass fabricated to fit into teller knee space areas, turret risers, and adjacent half high walls. Full height walls adjacent to the teller counter should be protected as well.
 - 1.) Fiberglass sheeting in the counter shall have a painted finish. Fiberglass installed onto half walls and full height walls will be finished in plastic laminate to match the existing counter and or door.
- G2. Fiberglass shall have all necessary cutouts provided for electrical receptacles, alarm, and computer equipment.
- G3. New Construction Applications: UL Level I fiberglass sheet material shall be installed by the mill worker within the new millwork, as well as in all half wall and full wall structures adjacent to the teller counter. Fiberglass full sheets or factory cut panels will be shipped directly to the Millworker.