# SECTION 13 47 00 BULLET RESISTANT ARCHITECTURAL PANELS

## PART 1: GENERAL

1.1 REFERENCE

The publication below forms a part of this specification.

UNDERWRITERS LABORATORY UL 752 11th Edition
Standard for Bullet Resisting Equipment dated Sept 5, 2005
AMERICAN SOCIETY FOR TESTING AND MATERIALS
ASTM E119-00a Standard Test for ONE HOUR FIRE RATING
of building construction and materials.

1.2 SUBMITTALS

The following shall be submitted in accordance with Division 1 and the SPECIAL CONTRACT REQUIREMENTS: Submit for approval prior to fabrication catalog cuts, brochures, specifications, U. L. LISTING VERIFICATION, proof of possession of PRODUCT LIABILITY INSURANCE in an amount not less than Five Million U.S. Dollars, and printed data in sufficient detail to indicate compliance with the contract documents and the manufacturer's instructions for the installation of Bullet Resistant Fiberglass Composite Panels. The fiberglass composite provider must be ISO 9001:2008 Certified with proof of certification from an accredited registrar. Furnish verification of compliance with ASTM E119-00a ONE HOUR FIRE RATING from a recognized testing laboratory.

1.3 DESIGN

Through the design, manufacturing technique and material application the Bullet Resistant Fiberglass Composite shall be of the "non-ricochet type". This design is intended to permit the capture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration.

1.4 DELIVERY, STORAGE AND HANDLING

Deliver the materials to the project with the manufacturer’s U. L. Labels intact and legible. Handle the material with care to prevent damage. Store the materials inside under cover, stack flat and off the floor.

1.5 WARRANTY

All materials and workmanship shall be warranted against defects for a period of two (2) years from the date of receipt at the project site.

## PART 2: PRODUCTS

2.1 ARMORCLAD BULLET RESISTANT ARCHITECTURAL PANEL

The panel facing shall be made of a minimum 20 ga. Stainless Steel or .032 aluminum. Finish as selected by Architect from manufacturer’s standard selection. Bullet resistant core shall be ARMORTEX® multiple layers of woven roving ballistic grade fiberglass cloth impregnated with a thermoses polyester resin and compressed into flat rigid sheets.

The production technique and materials used shall provide the controlled internal delamination to permit the capture of a penetrating projectile. Bullet Resistant fiberglass composite panels shall be **ARMORCLAD™**, as manufactured by CAP Industries, Inc., Beltsville, Maryland 20705. Phone: (301)-937-4383, (866)-583-2726, Fax: (301)-937-6850, www.metalpanelstore.com. Unlisted bullet resistant composite products will not be considered acceptable or equal.

2.2 SECURITY LEVEL
The Bullet Resistant Fiberglass Composite panel(s) must be **UL Listed** rated for level (( )).

2.3 SUBSTITUTIONS
Other UL Listed bullet resistant fiberglass composite products are acceptable if in compliance with all requirements of this specification. Alternate products must be submitted to the architect for approval two weeks prior to bidding.

## PART 3: EXECUTION

3.1 SUPPORTING MEMBERS
Prior to installing the bullet resistive material the contractor shall verify that all supports have been installed as required by the contract documents and the architectural drawings.

3.2 JOINTS
All joints shall be reinforced by a back-up layer of bullet resistive material. The bullet resistance of the joint, as reinforced, shall be at least equal to that of the panel. Minimum width of reinforcing layer at joint shall be 4" (2" on each panel or a 2" minimum overlap).

3.3 APPLICATION
Armor shall be installed in accordance with the manufacturer's printed recommendations. Armor panels shall be adhered using an industrial adhesive, mastic, screws or bolts. Method of application shall maintain the bullet resistive rating at junctures with the concrete floor slab, the concrete roof slab, the bullet resistive door frames, the bullet resistive window frames, and all required penetrations.

** End of Section **