

SECTION 102600

WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies wall guards (crash rails or bumper guards), handrail/wall guard combinations, corner guards and door/door frame protectors and high impact wall covering.

1.2 RELATED WORK

- A. Structural steel corner guards: Section 055000, METAL FABRICATIONS.
- B. Armor plates and kick plates not specified in this section: Section 087100, DOOR HARDWARE.

1.3 SUBMITTALS

- A. Submit in accordance with Section 013323, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings: show design and installation details.
- C. Manufacturer's Literature and Data:
 - 1. Handrail/Wall Guard Combinations.
 - 2. Wall Guards.
 - 3. Corner Guards.
 - 4. High Impact Wall covering.
- D. Test Report: Showing that resilient material complies with specified fire and safety code requirements.

1.4 DELIVERY AND STORAGE

- A. Deliver materials to the site in original sealed packages or containers marked with the name and brand, or trademark of the manufacturer.
- B. Protect from damage from handling and construction operations before, during and after installation.
- C. Store in a dry environment of approximately 21° C (70 degrees F) for at least 48 hours prior to installation.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - A167-99(R2009)....Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
 - B221-08.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes

D256-06.....Impact Resistance of Plastics

D635-06.....Rate of Burning and/or Extent and Time of Burning of
Self-Supporting Plastics in a Horizontal Position

E84-09.....Surface Burning Characteristics of Building Materials

C. The National Association of Architectural Metal Manufacturers (NAAMM):

AMP 500-06.....Metal Finishes Manual

D. National Fire Protection Association (NFPA):

80-10.....Standard for Fire Doors and Windows

E. Society of American Automotive Engineers (SAE):

J 1545-05.....Instrumental Color Difference Measurement for Exterior
Finishes.

F. Underwriters Laboratories Inc. (UL):

Annual Issue.....Building Materials Directory

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A167, Type 302B.

B. Aluminum Extruded: ASTM B221, Alloy 6063, Temper T5 or T6.

C. Resilient Material:

1. Extruded and injection molded acrylic vinyl or extruded polyvinyl
chloride meeting following requirements:

- a. Minimum impact resistance of 1197 ps (25 ft lbs per sq.ft) when tested
in accordance with ASTM D256 (Izod impact, ft.lbs. per inch notch).
- b. Class 1 fire rating when tested in accordance with ASTM E84, having
a maximum flame spread of 25 and a smoke developed rating of 450 or
less.
- c. Rated self extinguishing when tested in accordance with ASTM D635.
- d. Material shall be labeled and tested by Underwriters Laboratories or
other approved independent testing laboratory.
- e. Integral color with all colored components matched in accordance with
SAE J 1545 to within plus or minus 1.0 on the CIE-LCH scales.
- f. Same finish on exposed surfaces.

2.2 CORNER GUARDS

A. Resilient, Shock-Absorbing Corner Guards: Surface mounted type of 30 mm
(1-1/4 inch radius) formed to profile shown.

1. Snap-on corner guard formed from resilient material, minimum 2 mm
(0.078-inch) thick, free floating on a continuous 1.6 mm (0.063-inch)
thick extruded aluminum retainer. Design retainer used for flush mounted
type to act as a stop for adjacent wall finish material. Provide
appropriate mounting hardware, cushions and base plates as required.

2. Provide factory fabricated end closure caps at top and bottom of surface mounted corner guards.
3. Flush mounted corner guards installed on any fire rated wall shall maintain the fire rating of the wall. Provide fire test of proposed corner guard system to verify compliance.
 - a. Where insulating materials are an integral part of the corner guard system, the insulating materials shall be provided by the manufacturer of the corner guard system.
 - b. All exposed metal in fire rated assemblies shall have a paintable finish.
- B. Stainless Steel Corner Guards: Fabricate of 1.6 mm (0.0625-inch) thick stainless steel. Form guards of dimensions and to contour shown.

2.3 WALL GUARDS AND HANDRAILS

- A. Resilient Wall Guards and Handrails:
 1. Handrail/Wall Guard Combination: Snap-on covers of resilient material, minimum 2 mm (0.078-inch) thick, shall be free-floated on a continuous, extruded aluminum retainer, minimum 1.8 mm (0.072-inch) thick, anchored to wall at maximum 760 mm (30 inches) on center.
 2. Wall Guards (Crash Rails): Snap-on covers of resilient material, minimum 2.8 mm (0.110-inch) thick, shall be free-floated over 50 mm (two-inch) wide aluminum retainer clips, minimum 2.3 mm (0.090-inch) thick, anchored to wall at maximum 600 mm (24 inches) on center, supporting a continuous aluminum retainer, minimum 1.6 mm (0.062-inch) thick; or, shall be free-floated over a continuous extruded aluminum retainer, minimum (0.090-inch) thick anchored to wall at maximum 600 mm (24 inches) on center.
 3. Provide handrails and wall guards (crash rails) with prefabricated and closure caps, inside and outside corners, concealed splices, cushions, mounting hardware and other accessories as required. End caps and corners shall be field adjustable to assure close alignment with handrails and wall guards (crash rails). Screw or bolt closure caps to aluminum retainer.

2.4 HIGH IMPACT WALL COVERING

- A. Fabricate from vinyl acrylic or polyvinyl chloride resilient material minimum 6mm (0.20 inch) thick designed specially for interior use.
- B. Coordinate with guard rail protection material and supplier for proper fit, installation and color.
- C. Provide adhesive as recommended by the wall covering manufacturer.

2.5 FASTENERS AND ANCHORS

- A. Provide fasteners and anchors as required for each specific type of installation.
- B. Where type, size, spacing or method of fastening is not shown or specified, submit shop drawings showing proposed installation details.

2.6 FINISH

- A. In accordance with NAAMM AMP 500 series.

B. Aluminum:

1. Concealed aluminum: Mill finish as fabricated, uniform in color and free from surface blemishes.

C. Stainless Steel: NAAMM finish Number 4.

- D. Resilient Material: Embossed texture and color in accordance with SAE J 1545 and as specified on the drawings.

PART 3 - INSTALLATION

3.1 RESILIENT CORNER GUARDS

- A. Install corner guards on walls in accordance with manufacturer's instructions.

3.2 STAINLESS STEEL CORNER GUARDS

- A. Mount guards on external corners of interior walls, partitions and columns as shown.
- B. Where corner guards are installed on walls, partitions or columns finished with plaster or ceramic tile, anchor corner guards as shown on drawings. Provide continuous 16 gage perforated, galvanized Z-shape steel anchors welded to back edges of corner guards and expansion bolted to concrete or masonry with four 9.5 mm (3/8-inch) diameter bolts, spaced 400 mm (16 inches) on centers. Coat back surfaces of corner guards, where shown, with a non-flammable, sound deadening material. Corner guards shall overlap finish plaster surfaces.
1. Where corner guards are installed on exposed structural glazed facing tile units or masonry wall, partitions or columns, anchor corner guards to existing walls with 6 mm (1/4-inch) oval head stainless steel countersunk expansion or toggle bolts. Grout spaces solid between guards and backing with Portland cement and sand mortar.
 2. Where corner guards are installed on gypsum board, clean surface and anchor guards with a neoprene solvent-type contact adhesive specifically manufactured for use on gypsum board construction. Remove excess adhesive from around edge of guard and allow to cure undisturbed for 24 hours.

3.3 RESILIENT HANDRAIL AND RESILIENT WALL GUARDS (CRASH RAIL)

- A. Secure guards to walls with brackets and fasteners in accordance with manufacturer's details and instructions.

3.4 HIGH IMPACT WALL COVERING

- A. Surfaces to receive protection shall be clean, smooth and free of obstructions.
- B. Apply with adhesive in controlled environment according to manufacturer's recommendations.

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