SECTION 10 26 00

WALL AND DOOR PROTECTION
08/17

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF45	(2003; Reaffirmed 2009) Designation System for Aluminum Finishes

ASTM INTERNATIONAL (ASTM)

ASTM A240/A240M	(2022) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM B221	(2021) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
ASTM D256	(2010; R 2018) Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
ASTM D543	(2014) Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
ASTM D635	(2018) Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
ASTM E84	(2023) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM G21	(2015; R 2021; E 2021) Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)

CDPH SECTION 01350	(2017; Version 1.2) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers

JAPANESE STANDARDS ASSOCIATION (JSA)

JIS A 1901	(2015) Determination of the Emission of Volatile Organic Compounds and Aldehydes by Building Products - Small Chamber Test Method
JIS A 6909	(2021) Coating Materials for Textured Finishes of Buildings

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM AMP 500	(2006) Metal Finishes Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 80	(2022) Standard for Fire Doors and Other Opening Protectives

SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL (SAE)

SAE J1545	(2005; R 2014) Instrumental Color Difference Measurement for Exterior Finishes, Textiles and Colored Trim

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.] [information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Corner Guards; G[, [_____]]

Wall Guards (Bumper Guards); G[, [_____]]

Door Protectors; G[, [_____]]

Wall Covering/Panels; G[, [_____]]

SD-03 Product Data

Corner Guards; G[, [_____]]

Wall Guards (Bumper Guards); G[, [_____]]

Door Protectors; G[, [_____]]

Wall Covering/Panels; G[, [_____]]

[Recycled content for aluminum component of corner guards; S]

[Recycled content for steel component of corner guards; S]

[Recycled content for aluminum component of wall guards, Combination Handrail/Wall guard and handrails; S]

[Recycled content for aluminum component of wall guards/bed locators; S]

[Recycled content for aluminum component of combination handrail/wall guards; S]

[Recycled content for aluminum component of handrails; S]

SD-04 Samples

Finish; G[, [_____]]

SD-06 Test Reports

Corner Guards

Wall Guards (Bumper Guards)

Door Protectors

Wall Covering/Panels

SD-07 Certificates

Corner Guards

Wall Guards (Bumper Guards)

Door Protectors

[Indoor air quality for wall covering/panels; S]

[Indoor air quality for adhesives; S]

1.3 CERTIFICATIONS

1.3.1 Indoor Air Quality

1.3.1.1 Wall Covering/Panels

Provide sheet and high impact resistant resilient materials certified to meet indoor air quality requirements of JIS A 1901 (use the office or classroom requirements, regardless of space type) and formaldehyde emission class F**** per JIS A 6909. Provide current product certification documentation from certification body. When product does not have certification, provide validation that product meets the indoor air quality product requirements cited herein.

1.3.1.2 Adhesives and Sealants

Provide products certified to meet indoor air quality requirements of JIS A 1901 (use the office or classroom requirements, regardless of space type) and formaldehyde emission class F**** per JIS A 6909. Provide current product certification documentation from certification body When product does not have certification, provide validation that product meets

the indoor air quality product requirements cited herein..

1.4 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the project site in manufacturer's original unopened containers with seals unbroken and labels and trademarks intact. Keep materials dry, protected from weather and damage, and stored under cover. Materials must be stored at approximately 21 degrees C for at least 48 hours prior to installation.

1.5 WARRANTY

Provide manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period.

PART 2 PRODUCTS

2.1 STANDARD PRODUCTS

To the maximum extent possible, corner guards, door and door frame protectors, wall guards (bumper guards), wall panels and wall covering must be the standard products of a single manufacturer and must be furnished as detailed. Drawings show general configuration of products required, and items differing in minor details from those shown will be acceptable.

2.1.1 Resilient Material

Provide resilient material consisting of high impact resistant extruded acrylic vinyl, polyvinyl chloride, or injection molded thermal plastic conforming to the following:

2.1.1.1 Minimum Impact Resistance

Minimum impact resistance must be 960.8 N-m/m when tested in accordance with ASTM D256, (Izod impact, ft-lbs per sq inch notched).

2.1.1.2 Fire Rating

Fire rating must be Class 1 when tested in accordance with ASTM E84, having a maximum flame spread of 25 and a smoke developed rating of 450 or less. Material must be rated self extinguishing when tested in accordance with ASTM D635. Material must be labeled and tested by an approved nationally known testing laboratory. Resilient material used for protection on fire rated doors and frames must be listed by the testing laboratory performing the tests. Resilient material installed on fire rated wood/steel door and frame assemblies must have been tested on similar type assemblies. Test results of material tested on any other combination of door/frame assembly will not be acceptable.

2.1.1.3 Integral Color

Colored components must have integral color and must be matched in accordance with SAE J1545 to within plus or minus 1.0 on the CIE-LCH scales.

2.1.1.4 Chemical and Stain Resistance

Materials must be resistant to chemicals and stains reagents in accordance

with ASTM D543.

2.1.1.5 Fungal and Bacterial Resistance

Materials must be resistant to fungi and bacteria in accordance with ASTM G21, as applicable.

2.2 CORNER GUARDS

2.2.1 Resilient Corner Guards

Corner guard units must be [flush mounted] [surface mounted] type, radius formed to profile shown. Corner guards must [extend from floor to ceiling.] [be [_____] mm high.] Mounting hardware, cushions, and base plates must be furnished. Assembly must consist of a snap-on corner guard formed from high impact resistant resilient material, mounted on a continuous aluminum retainer. Extruded aluminum retainer must conform to ASTM B221, alloy 6063, temper T5 or T6. Provide aluminum components that contain a minimum of 35 percent recycled content. Provide data identifying percentage of recycled content for aluminum component of corner guards. Flush mounted type guards must act as a stop for adjacent wall finish material. Factory fabricated end closure caps must be furnished for top and bottom of surface mounted corner guards. Flush mounted corner guards installed in fire rated wall must maintain the rating of the wall. Insulating materials that are an integral part of the corner guard system must be provided by the manufacturer of the corner guard system. Exposed metal portions of fire rated assemblies must have a paintable surface.

2.2.2 Stainless Steel Corner Guards

Stainless steel corner guards must be fabricated of [1.3 mm][0.9 mm] thick material conforming to ASTM A240/A240M, type 302 or 304. Provide stainless steel base material that contains a minimum of 60 percent recycled content. Provide data identifying percentage of recycled content for steel component of corner guards. Corner guards must [extend from floor to ceiling.] [be [_____] mm high.] Corner guard must be formed to dimensions shown.

2.3 WALL GUARDS (BUMPER GUARDS)

2.3.1 Wall Guards, Combination Handrail/Wall Guards and Handrails

Wall guards, combination handrail/wall guards, and handrails must be provided with prefabricated end closure caps, inside and outside corners, concealed splices, cushions, mounting hardware and other accessories standard with the manufacturer. Extruded aluminum retainers must conform to ASTM B221, alloy 6063, temper T5 or T6. Provide aluminum components that contain a minimum of 35 percent recycled content. Provide data identifying percentage of recycled content for aluminum component of wall guards, combination handrail/wall guard and handrails. End caps and corners must be field adjustable to assure close alignment with handrails and wall guards. [Wall guards] [Combination handrail/wall guards] must have profile [as shown] [as shown with [vinyl] [carpet] [_____] inserts].

2.3.2 Wall Guards/Bed Locators

Wall guards must consist of snap-on covers of high impact resistant resilient material, minimum 1.98 mm thick, mounted over [50] [_____] mm

wide aluminum, minimum 1.57 mm thick retainer, anchored to wall at maximum 600 mm on center. Provide aluminum components that contain a minimum of 35 percent recycled content. Provide data identifying percentage of recycled content for aluminum component of wall guards/bed locators.

2.3.3 Combination Handrail/Wall Guards

Combination handrail/wall guards must consist of snap-on covers of high impact resistant resilient material, minimum 1.98 mm thick, on a continuous, extruded aluminum retainer, minimum 1.83 mm thick anchored to wall at maximum 800 mm on center. Provide aluminum components that contain a minimum of 35 percent recycled content. Provide data identifying percentage of recycled content for aluminum component of combination handrail/wall guards.

2.3.4 Handrails

Handrails must consist of snap-on covers of high impact resistant resilient material, minimum 1.98 mm thick on a continuous extruded aluminum retainer, minimum 1.83 mm thick anchored to wall at maximum 800 mm on center. Provide aluminum components that contain a minimum of 35 percent recycled content. Provide data identifying percentage of recycled content for aluminum component of handrails. Handrails must be provided with prefabricated end closure caps, inside and outside corners, concealed splices, cushions, mounting hardware and other accessories standard with the manufacturer. End caps and corners must be field adjustable to assure close alignment with handrails.

2.4 DOOR PROTECTORS

[Door] [Door envelope] [Door knob] [and] [door frame] protection items must consist of high impact resistant acrylic vinyl or polyvinyl chloride resilient material, minimum [1.52 mm thick for doors] [and] [0.89 mm thick for door frames]. Coordinate door and door frame protection material requirements with door and frame suppliers to insure fit for all components and color matching with other resilient materials. Provide adhesive as recommended by resilient material manufacturer.

2.5 WALL COVERING/PANELS

Provide wall covering/panels consisting of high impact rigid acrylic vinyl or polyvinyl chloride resilient material. Panel sizes must be [600 mm x 1220 mm] [_____]. Submit fire rating and extinguishing test results for resilient material. Also submit statements attesting that the items comply with specified fire and safety code requirements. Provide wall covering material used on the interior of the building (defined as inside of the weatherproofing system) that meets either emissions requirements of CDPH SECTION 01350 (use the office or classroom requirements, regardless of space type) the VOC content requirements of JIS A 1901 (use the office or classroom requirements, regardless of space type) and formaldehyde emission class F**** per JIS A 6909. Provide certification or validation of indoor air quality for wall covering/panels.

2.5.1 Rigid Vinyl Acrylic Wall Covering

Wall covering thickness must be [0.56] [0.71] [1.02] [1.52] mm.

2.5.2 High Impact Wall Panels

Wall panel face and edge thickness must be [0.56] [0.71] mm. Panel face must be factory banded to a 9.53 mm thick fiberboard core. The backside of the panel must be laminated with a moisture resistant vapor barrier.

2.6 TRIM, FASTENERS AND ANCHORS

Provide vinyl trim, fasteners and anchors for each specific installation as shown.

2.7 FINISH

Submit [three] [_____] samples indicating color and texture of materials requiring color and finish.

2.7.1 Aluminum Finish

Finish for aluminum must be in accordance with AA DAF45. Exposed aluminum must be designation [[AA-C22A31] [_____] chemically etched medium matte, with clear anodic coating] [[AA-C22A32] [_____] chemically etched medium matte with integrally colored anodic coating] class II architectural coating 0.010 mm thick. Concealed aluminum shall be mill finish as fabricated, uniform in natural color and free from surface blemishes.

2.7.2 Stainless Steel Finish

Finish for stainless steel must be in accordance with [ASTM A240/A240M, Type 302 or 304] [NAAMM AMP 500], finish number 4.

2.7.3 Resilient Material Finish

Finish for resilient material must be [embossed [velour] [stipple] [_____]] [[fake woodgrain] [high gloss vinyl]] texture with colors in accordance with SAE J1545.

2.8 ADHESIVES

Adhesive for resilient material must be in accordance with manufacturers recommendations. Provide sealants and non-aerosol adhesive products used on the interior of the building (defined as inside of the weatherproofing system) that meet either emissions requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type) the VOC content requirements of JIS A 1901 (use the office or classroom requirements, regardless of space type) and formaldehyde emission class F**** per JIS A 6909. Provide certification or validation of indoor air quality for adhesives.

2.9 COLOR

Color must be [in accordance with Section 09 06 00 SCHEDULES FOR FINISHES.] [as indicated.] [selected from manufacturers standard colors.] [[_____.] Color listed is not intended to limit the selection of equal colors from other manufacturers.]

PART 3 EXECUTION

3.1 INSTALLATION

Do not install items that show visual evidence of biological growth.

3.1.1 Corner Guards and Wall Guards (Bumper Guards)

Material must be mounted at location indicated in accordance with manufacturer's recommendations.

3.1.2 Door, Door Frame Protectors, and Wall Panels

Surfaces to receive protection must be clean, smooth, and free of obstructions. Protectors must be installed after frames are in place, but prior to hanging of doors, in accordance with manufacturer's specific instructions. Adhesives must be applied in controlled environment in accordance with manufacturer's recommendations. Protection for fire doors and frames must be installed in accordance with NFPA 80.

3.1.3 Stainless Steel Guards

a. Mount guards on external corners of interior walls, partitions and columns as [shown] [in accordance with manufacturer's recommendations].

b. Where corner guards are installed on walls, partitions or columns finished with plaster or ceramic tile, [anchor corner guards as indicated] [provide continuous 1.5 mm thick, perforated, galvanized z-shape steel anchors welded to back edges of corner guards and [wired to metal studs] [expansion bolted to concrete or masonry with four 10 mm diameter bolts, spaced 400 mm on centers]]. Coat back surfaces of corner guards, where shown, with a non-flammable, sound deadening material. Corner guards must overlap finish plaster surfaces.

c. Where corner guards are installed on exposed structural glazed facing tile units or masonry wall, partitions or columns, [anchor corner guards as indicated] [anchor corner guards to existing walls with 6 mm oval head stainless steel countersunk expansion or toggle bolts] [anchor corner guards with four nominal 1.3 mm thick, adjustable galvanized steel anchors, spaced as shown]. Grout spaces solid between guards and backing with portland cement and sand mortar.

d. Where corner guards are installed on gypsum board, clean surfaces and anchor guards with a neoprene solvent-type contact adhesive specifically manufactured for use on gypsum board construction. Remove excess adhesive from the guard edges and allow to cure undisturbed for 24 hours.

e. For wall guards, space brackets at no more than 900 mm on centers and anchor to the wall in accordance with the manufacturer's installation instructions.

-- End of Section --