

SECTION 10 26 00 – WALL PROTECTION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Corner Guards.
2. Crash Rails/Bumper Guards/Chair Rails.
3. Semi-Rigid Protective Wallcoverings.

B. Related Sections:

1. Section 06 10 53 – Miscellaneous Carpentry.
2. Section 09 21 16 – Gypsum Board Assemblies.
3. Section 09 22 16 – Non-Structural Metal Framing: Backing plate and metal stud framing for securing corner guards.

C. References:

1. ANSI, American National Standards Institute.
2. ASTM, American Society for Testing and Materials.
3. NFPA, National Fire Protection Association.
4. UL, Underwriters Laboratory.
5. ADA, Americans with Disabilities Act.

1.02 PERFORMANCE REQUIREMENTS

A. Installed Wall Rail Component Assembly:

1. Handrails shall be designed to resist a load of 50 pounds per linear foot applied in any direction at the top and to transfer this load through supports to the structure.
2. Handrails shall be able to resist a single concentrated load of 200 pounds applied in any direction at any point along the top and to transfer this load through the supports to the structure. This load need not be assumed to act concurrently with 50 pounds per linear foot design loads.

B. Corner Guards: Resist lateral impact force of 100 lbs at any point without damage or permanent set.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 – Submittal Procedures.
- B. Product data indicating compliance with specified requirements. Include physical dimensions, features, wall mounting brackets with mounted measurements, anchorage details, and rough-in measurements.
- C. Shop Drawings showing methods of attachment to substrate and locations of wall protection.
- D. Samples: Submit one section of wall protection illustrating component design, configuration, selection of color, pattern and surface texture.
 - 1. 12 inch long samples of each type of handrail, wall and corner guard required. Include examples of joinery, corners, and field splices.
 - 2. 7 by 9 inch samples of each rigid sheet or panel type wall surface protection material required.
 - 3. Provide trim accessories in color to match wall protection. Provide sample for verification to architect prior to ordering.
- E. Manufacturer's Installation Instructions – Indicate installation rough-in measurements and instructions.
- F. Manufacturer's Certificate – Certify that products meet or exceed flame spread rating for surface finish.

1.04 QUALITY ASSURANCE

- A. Fire Performance Characteristics: Proved UL classified wall protection assemblies with NFPA Class A fire rating. Comply with ASTM E 84 for the fire performance characteristics indicated below. Identify components with markings from testing and inspection organization.
 - 1. Flame Spread: 25 or less.
 - 2. Smoke Developed: 450 or less.
- B. Single-Source Responsibility: Obtain wall surface protection system components from a single source.
- C. Deliver materials in original factory wrappings and containers, clearly labeled with manufacturer and brand name.
- D. Store materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
 - 1. Maintain room temperature within the storage area between 60 degrees F (16 degrees C) and 80 degrees F (27 degrees C) during the period plastic materials are stored. Keep materials out of direct sunlight to avoid excessive surface temperatures.
 - 2. Store rigid plastic corner guard, wall guard, and handrail covers in a horizontal position for a minimum of 72 hours, or until the plastic material attains the

ambient room installation temperature of between 65 degrees F (18 degrees C) and 75 degrees F (24 degrees C).

- E. Chemical and Stain Resistance: Provide wall protection system components with chemical and stain resistance in accordance with ASTM D1308.
- F. Color Consistency: Provide components matched in accordance with SAE J-1545-(Delta E) with a color difference no greater than 1.5 units using CIE Lab, CIE CMC, CIE LCh, Hunter Lab or similar color space scale systems.
- G. Impact Strength: Provide assembled wall protection units that have been tested in accordance with the applicable provisions of ASTM F476.

1.05 PROJECT CONDITIONS

- A. Maintain ambient temperature within building at not less than 65 degrees F (18 degrees C) or greater than 75 degrees F (24 degrees C) for a minimum 72 hours prior to beginning installation.
- B. Do not install wall surface protection system components until the space is enclosed, weatherproof and climate controlled.
- C. Do not install semi-rigid wall protection systems until temperature is stable and permanent lighting is in place.

1.06 MAINTENANCE

- A. Maintenance Instructions: Include precautions against cleaning materials and methods that may be detrimental to finishes and performance.
- B. Replacement materials: Minimum 2 percent of each type, color, and pattern of wall surface protection materials and components. **Include accessory components as required. Replacement materials shall be from the same production run as installed materials. Package with protective coverings and appropriate labels.

1.07 FIELD MEASUREMENTS

- A. Verify field measurement prior to fabrication.

1.08 COORDINATION

- A. Coordinate Work with wall or partition sections for installation of concealed blocking or anchor devices.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: Koroseal Wall Protection Systems. Drawings and specifications are based on manufacturer's literature from Koroseal Wall Protection Systems unless otherwise indicated.
- B. Substitutions: Under provisions of Section 01 60 00.

2.02 COMPONENTS

- A. Rigid Plastic Material: Extruded, textured, chemical- and stain-resistant, high-impact, acrylic modified vinyl plastic, thickness as indicated. Comply with specified requirements of ASTM D256 for impact resistance and ASTM E84 for flame spread and smoke developed characteristics. Color: As selected by Architect from the manufacturer's full range of standard colors.
- B. Aluminum Extrusions: ASTM B221 (ASTM B221M) for 6063-T6.
- C. Fasteners: Provide non-corrosive metal screws, bolts, and other fasteners compatible with aluminum components, hardware, anchors, and other items being fastened. Use theft-proof fasteners where exposed to view.

2.03 CORNER GUARDS

- A. Surface-Mounted, Resilient Plastic Corner Guards: CG1, EP1
 - 1. Cover: Rigid, impact-resistant plastic, minimum 0.078 inch (1.9mm) thick, in dimensions and profiles indicated.
 - 2. Retainer: Continuous, one-piece, extruded aluminum retainer, minimum 0.062 inch (1.6 mm) thick.
 - 3. CG1: G100 Series, 2 inch by 2 inch by 48 inches high; corner Radius: 1/4 inch.
 - 4. EP1: G110 Series, 2 inch by 2 inch by 48 inches high with high impact filler sheet.
 - 5. Accessories: Prefabricated aluminum retainer with concealed splices, mounting hardware and other accessories as required.
 - a. End Caps:
 - 1) Match plastic cover color.
 - 2) Field adjustable for close alignment with snap-on plastic covers.
 - 6. Color: As selected. Refer to Finish Schedule
 - 7. Screws: As recommended by the manufacturer.

2.04 WALL GUARDS

- A. Chair Rail Type Wall Guard: CR2
 - 1. Model CH20, 2-1/8 inches chair rail with full-length vinyl cover and PVC retainer.
 - 2. Color: As selected. Refer to Finish Schedule.

2.05 IMPACT-RESISTANT WALLCOVERINGS

- A. Semi-rigid, Integrally colored Sheet Wallcovering: Semi-rigid, embossed, impact-resistant plastic sheets or roll stock. Comply with fire performance characteristics specified and be chemical- and stain-resistant.

1. 500 Series: Solid Colors.
 - a. Sheet/Roll Thickness: 0.040 inch (1.0 mm) thick, Class I/A Fire-Rated.
2. Color: As Selected. Refer to Finish Schedule.
3. Screws: As recommended by manufacturer.
- B. Color Matched or Complimentary Accessory Moldings: Manufacturer's Standard.
 1. J-Molding: #82.
 2. Divider Bar: #87/88.
 3. Inside Corner: #83.
 4. Outside Corner: #85.
 5. Color: As selected.
- C. Color Matched Caulk: Manufacturer's Standard.
- D. Adhesive and Primer: As recommended by the manufacturer.
 1. Maximum VOC content: 50 g/L.

2.06 FABRICATION

- A. Comply with requirements indicated for design, dimensions, details, finish and member sizes, including wall thicknesses of components.
- B. Shop-assemble components to the greatest extent possible. Disassemble only as necessary for shipping and handling.
- C. Fabricate component with tight seams and joints with exposed edges rolled. Provide surfaces free of evidence of wrinkling, chipping, uneven coloration, dents and other imperfections. Fabricate members and fittings to produce flush, smooth and rigid hairline joints.
- D. Brackets, Flanges, Fittings and Anchors: Provide wall brackets, flanges, miscellaneous fitting and anchors for interconnection of members to other construction.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions in which wall surface protection components and wall protection systems will be installed.
- B. Complete finishing operations, including painting, before beginning installation of wall surface protection system materials.

- C. Wall surfaces to receive impact-resistant wallcovering materials shall be dry and free from dirt, grease, loose paint, and scale.
- D. Do not proceed with installations until unsatisfactory conditions have been corrected.
- E. Verify rough-in for components are correctly sized and located.

3.02 PREPARATION

- A. Properly prepare substrate and clean to remove dust, debris and loose particles.

3.03 INSTALLATION

- A. Install wall surface protection units plumb, level and true to line without distortions.
- B. Do not use materials with chips, cracks, voids, stains or other defects that might be visible in the finished work.
- C. Install aluminum retainers, mounting brackets, and other accessories in strict accordance with the manufacturer's instructions.
- D. Where splices occur in horizontal runs of over 20 feet (6 m), splice aluminum retainer and plastic cover at same locations along the run.
- E. Position surface-mounted corner guards atop wall base.
- F. Coordinate height of bumper/crash rail with Owner.
- G. Position top of corridor hand rail 36 inches (914.4 mm) from finished floor.
- H. Terminate rails 1 inch (25.4 mm) short of door openings, intersecting walls, corner guards and swing of corridor dual egress doors.
- I. Return rails to wall.
- J. Where handrail is used in conjunction with sheet goods terminate top of sheets at Center Line of handrail.
- K. Install rigid vinyl wallcovering sheets with texture running in the same direction for uniform appearance.
- L. Coordinate installation of vinyl fabric wall covering with corner guard frame and cover.

3.04 ERECTION TOLERANCES

- A. Maximum Variation from Required Height for Horizontal Rails: 1/4 inch (6mm).
- B. Maximum Variation from Level or Plane for Visible Length for Horizontal Rails: 1/4 inch (6 mm).

3.05 CLEANING

- A. Clean plastic covers and accessories using a standard non-ammonia-based household cleaning agent.
- B. Clean metal components in accordance with the manufacturer's recommendations.
- C. Remove excess adhesive in manner recommended by manufacturer.

3.06 PROTECTION

- A. Protect installed materials to prevent damage by other trades.

END OF SECTION