PART 1 - GENERAL

1.1   SUMMARY

EDIT ITEMS NOT INCLUDED IN THE PROJECT

- A.   Section Includes:
    1.   Wall Protection Systems:
        a.   Wall Guards.
        b.   Crash Rails.
        c.   Corner Guards.
        d.   Wood Handrails and Chair Rails.
        e.   Bumper Guards.
        f.   Handrails.
        g.   Bed Locators.
        h.   Chair Rails.
        i.   Semi-Rigid Protective Wallcoverings.
        j.   Extruded Corner Guards.
    2.   Door Protection Systems:
        a.   Door Frame Protectors.
        b.   Kick/Push Plates.
        c.   Door Knob Protectors.
        d.   Door Edge Protectors.
- B.   Related Sections/Items:
    1.   Steel angle and bent plate corner guard, refer to Section 05 50 00.
    2.   Wood blocking and grounds, refer to Section 06 10 00.
    3.   Stainless steel mop plates, kick plates, and armor plates, refer to Section 08 71 00.
    4.   Sheet vinyl wall covering, refer to Section 09 95 00.
    5.   Signage and graphics, refer to Section 10 04 26.

1.2   SUBMITTALS

- A.   Comply with Section 01 33 00.
- B.   Product data indicating compliance with specified requirements.
- C.   Shop drawings showing methods of attachment to substrate.
- D.   Samples: For selection of color, pattern, and surface texture.
    1.   12 inch (300 mm) long samples of each type of wall and corner guard required. Include examples of joinery, corners, and field splices.
    2.   7 x 9 inch (175 x 225 mm) samples of each rigid sheet or panel type wall surface protection material required.
    3.   6 inch long sample of wood handrail (chair rail).

1.3   QUALITY ASSURANCE

- A.   Fire Performance Characteristics: 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.

DELETE THE PARAGRAPHS BELOW IF DIVISION 1 REQUIREMENTS SATISFY PROJECT REQUIREMENTS.

- 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° F (16° C) and 80° F (27° 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° F (18° C) and 75° F (24° C).

1.4   PROJECT CONDITIONS

A.   Maintain ambient temperature within building at not less than 65° F (18° C) or greater than 75° F (24° C) for a minimum 72 hours prior to beginning of 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.

1.5   MAINTENANCE

A.   Maintenance Instructions: Include precautions against cleaning materials and methods that may be detrimental to finishes and performance.

ADJUST REPLACEMENT PERCENTAGE TO REFLECT PROJECT SIZE.

B.   Replacement Materials: Minimum 2% 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.

PART 2 - PRODUCTS

2.1   MANUFACTURERS

A.   Koroseal Wall Protection Systems, Muncy, PA. Ph: 800-628-0449; Fax: 330-668-7703; Internet Address: www.korogard.com.
B.   Drawings and specifications are based on manufacturer's literature from Koroseal Wall Protection Systems unless otherwise indicated.

2.2   MATERIALS

RETAIN THE NEXT PARAGRAPH IF THE PROJECT REQUIRES IMPACT-RESISTANT PLASTIC SHEET OR PANEL WALLCOVERING MATERIAL.

A.   Plastic Sheet Wallcovering Material: Textured, chemical- and stain-resistant, high-impact, acrylic modified vinyl plastic sheets, thickness as indicated. Comply with specified requirements of ASTM D 256 for impact resistance and ASTM E 84 for flame spread and smoke developed characteristics.
Color and/or Pattern: As selected by Architect from the manufacturer's full range of standard colors and textures.

RETAIN THE NEXT PARAGRAPHS FOR WALL SURFACE PROTECTION SYSTEMS USING RIGID IMPACT-RESISTANT PLASTIC PROFILE COVERS OVER ALUMINUM RETAINERS.

B.   Rigid Plastic Material: Extruded, textured, chemical- and stain-resistant, high-impact, acrylic modified vinyl plastic, thickness as indicated. Comply with specified requirements of ASTM D 256 for impact resistance and ASTM E 84 for flame spread and smoke developed characteristics. Color: As selected by Architect from the manufacturer's full range of standard colors.

C. Aluminum Extrusions: ASTM B 221 (ASTM B 221M) for 6063-T5.

D. Fasteners: Use 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.

2.3 WALL GUARDS

A. Crash Rail Type Wall Guards:
1. Cover:
a. Extruded, rigid, impact-resistant plastic, nominal 0.078 inch (1.9 mm) thick, in profile indicated.
b. Stainless steel, 16 gauge, type 304 with #4 Satin finish (Specify specific model number: CS5F or CS5V).
c. Aluminum, .250 inch (6.4 mm) thick, 5052-H32 with powder-coated finish (Specify specific model number: CS45).
2. Retainer:
a. Continuous, one-piece, extruded aluminum retainer, nominal 0.062 inch (1.6 mm) thick, with continuous vinyl cushion(s) or bumper(s) centered in the extrusion.
b. 2 inch long extruded aluminum clips (Specify specific model number: C460, C660, or C860).
c. Continuous vinyl cushion on aluminum retainer attached to 2 inch long extruded aluminum clips (Specify specific model number: C870).
d. 2 inch long stainless steel clips (Specify specific model number: CS5F or CS5V).

SELECT CRASH RAIL WALL GUARD MODEL

3. **C400 Series:** 4 inch (100 mm) high, surface-mounted flush on wall.
4. **C420 Series:** 4 inch (100 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
5. **C430 Series:** 4 inch (100 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
6. **C440 Series:** 4 inch (100 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
7. **C450 Series:** 4 inch (100 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
8. **C460 Series:** 4 inch (100 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low- to medium-impact.
9. **C500 Series:** 5 inch (125 mm) high, surface-mounted flush on wall.
10. **C520 Series:** 5 inch (125 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
11. **C530 Series:** 5 inch (125 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
12. **C540 Series:** 5 inch (125 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
13. **C550 Series:** 5 inch (125 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
14. **C560 Series:** 5 inch (125 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low- to medium-impact.
15. **C600 Series:** 6 inch (150 mm) high, surface-mounted flush on wall.
16. **C610 Series:** 6 inch (150 mm) high, surface-mounted flush on wall, with solid color insert.
17. **C620 Series:** 6 inch (150 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
18. **C630 Series:** 6 inch (150 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
19. **C640 Series:** 6 inch (150 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
20. **C650 Series:** 6 inch (150 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.

21. **C660 Series:** 6 inch (150 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low- to medium-impact.
22. **C680 Series:** 6 inch (150 mm) high, surface-mounted flush on wall, low- to medium-impact with pre-laminated Traffic Patterns® wallcovering insert.
23. **C6PL Series:** 6 inch (150 mm) high, surface-mounted flush on wall, with photoluminescent insert.
24. **C700 Series:** 7 inch (175 mm) high, surface-mounted flush on wall.
25. **C720 Series:** 7 inch (175 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
26. **C730 Series:** 7 inch (175 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
27. **C740 Series:** 7 inch (175 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
28. **C750 Series:** 7 inch (175 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
29. **C760 Series:** 7 inch (175 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low- to medium-impact.
30. **C800 Series:** 8 inch (200 mm) high, surface-mounted flush on wall.
31. **C820 Series:** 8 inch (200 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
32. **C830 Series:** 8 inch (200 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
33. **C840 Series:** 8 inch (200 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
34. **C850 Series:** 8 inch (200 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
35. **C860 Series:** 8 inch (200 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low- to medium-impact.
36. **C870 Series:** 8 inch (200 mm) high, surface-mounted with 2 inch aluminum clips and continuous vinyl cushion flush on wall.
37. **CS45 Series:** 4-1/2 inch (115 mm) high flat face, powder-coated finish, cut to size with prefabricated end returns only, extended mounting on 2-1/4" inch aluminum stand-offs.
38. **CS5F Series:** 5-1/2 inch (140 mm) high with a flat face, cut to size only and surface-mounted with 2 inch stainless steel clips.
39. **CS55 Series:** 5-1/2 inch (140 mm) high with a V-groove face, cut to size and surface-mounted with 2 inch stainless steel clips.
40. Accessories: Prefabricated, injection-molded or foam-molded (C600 Series) end caps and inside and outside corners with concealed splices, cushions, and other accessories as required.
    a. End caps and inside and outside corners shall match plastic cover color.
    b. Provide self-adjusting connector plate to align end caps.
    c. Factory installed stainless steel end plates (Specify specific model number: CS5F or CS55).
41. Color: As selected.
B. Bumper Rail/Chair Rail Type Wall Guards:
    1. Cover:
       a. Rigid, extruded, impact-resistant plastic, nominal 0.078 inch (2 mm) thick, in dimensions and profiles indicated.
       b. Rigid, thermoformed, impact-resistant plastic, nominal 0.06 inch (1.5 mm) thick (Specify specific model number: CH20).
    2. Retainer:
       a. Continuous, one-piece, extruded aluminum retainer, nominal 0.08 inch (2 mm) thick.
       b. Continuous, one-piece, extruded plastic retainer, nominal 0.08 inch (2 mm).

SELECT BUMPER RAIL WALL GUARD MODEL

3. **B120 Series:** 3-1/2 inch (89 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
4. **B130 Series:** 3-1/2 inch (89 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.

5. **B140 Series:** 3-1/2 inch (89 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
6. **B150 Series:** 3-1/2 inch (89 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
7. **B200 Series:** 1-1/2 inch (38 mm) high flexible extruded PVC bumper, surface-mounted.
8. **B300 Series:** 2 inch (50 mm) high, surface-mounted flush on wall, plastic retainer, low to medium impact.
9. **CH20 Chair Rail Series:** 2-1/4 inch (57 mm) high, surface-mounted flush on wall, plastic retainer, low- to medium-impact.
10. Accessories: Prefabricated end caps and corners with concealed splices, cushions, mounting hardware, and other accessories as required.
   a. Injection-molded end caps and outside corners: Match plastic cover color.
   b. Formed end caps: Match plastic cover (Specify specific model: CH20).
11. Color: As selected.

2.4   HANDRAILS

A. Bumper Rail Type Handrails: Comply with requirements of ANSI A117.1.
   1. Cover: Rigid, extruded, impact-resistant plastic, nominal 0.078 inch (2.0 mm) thick, in dimensions and profiles indicated.
   2. Retainer: Continuous, one-piece, extruded aluminum retainer, nominal 0.080 inch (2.0 mm) thick with continuous vinyl bumper cushion centered in the extrusion.

SELECT BUMPER RAIL HANDRAIL MODEL

3. **H100 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets.
4. **H110 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets with solid color accent strip.
5. **H180 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets with pre-laminated Traffic Patterns® wallcovering accent strip.
6. **H200 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets.
7. **H210 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets with two-color vinyl cover.
8. Accessories: Prefabricated, injection-molded or foam-molded end caps and inside and outside corners with concealed splices, cushions, and other accessories as required.
   End caps and inside and outside corners:
   (1) Match plastic cover color.
   (2) Self-aligning connector plate.
9. Color: As selected.

B. Handrails: Comply with requirements of ANSI A117.1.
   1. Covers: Two-part, rigid, extruded, impact-resistant plastic, nominal 0.078 inch (2.0 mm) thick, in dimensions and profiles indicated.
   2. Core: Continuous, one-piece, solid-milled medium-density fiberboard with pre-selected and finished colored accent thumb strip.
   3. **H400 Series:** 6-3/8 x 1-1/2 inch (162 x 38 mm), two-part covers mounted over continuous MDF core with mounting brackets.
   4. Accessories: Prefabricated, mitered end returns and outside corners and other accessories as required.
      End returns and outside corners: Match plastic covers colors.
   5. Colors: As selected.

C. Handrails: Comply with requirements of ANSI A117.1.
    1. Covers:
        a. Three-part, rigid, extruded, impact-resistant plastic, nominal 0.060 inch (1.5 mm) thick, in dimensions and profiles indicated (Specify specific model number: H600).
        b. Three-part, solid wood grip with rigid, extruded, impact-resistant plastic, nominal 0.060 inch (1.5 mm) thick, in dimensions and profiles indicated (Specify specific model number: H60W).
        c. Two-part, solid wood grip with powder-coated aluminum rail, 0.250 inch (6.4 mm) thick, 5052-H32 in dimensions and profiles indicated (Specify specific model number: HS50 or LS50).
    2. Retainer: Continuous, one-piece, extruded aluminum retainer, nominal 0.080 inches (2.0 mm) thick. (Specify specific model number: H600 or H60W).
    3. **H600 Series:** 6-1/8 x 1-1/2 inch (156 x 38 mm), three-part covers mounted over continuous aluminum retainer with mounting brackets.
    4. **H60W Series:** 6-1/8 x 1-1/2 inch (156 x 38 mm), three-part wood grip and covers mounted over continuous aluminum retainer with mounting brackets.
    5. **HS50 Series:** Nominal 5-1/2 inch x 1-1/2 (140 x 38 mm), two-part round wood grip and flat-faced aluminum rail with powder-coated finish, cut to size with prefabricated end returns only, mounting on 2-1/4 inch aluminum stand-offs.
    6. **LS50 Series:** Nominal 5-1/2 inch x 2 (140 x 50 mm), two-part oval wood grip and flat- faced aluminum rail with powder-coated finish, cut to size with prefabricated end returns only, mounting on 2-1/4 inch aluminum stand-offs.
    7. Accessories: Prefabricated, injection-molded caps and outside corners and other accessories as required.
        a. Injection-molded end caps and outside corners: Match plastic cover color. (Specify specific model number: H600).
        b. Injection-molded end caps and outside corners with solid wood grip: Match plastic cover and wood rail grip (Specify specific model: H60W).
    8. Colors: As selected.
    9. Wood Grip Finish (Specify specific model: H60W, HS50, or LS50):
        a. Red oak, natural unfinished (R0).
        b. Red oak, natural, clear top coat (R1).
        c. Red oak, red oak stain, clear top coat (R2).
        d. Red oak, cherry stain, clear top coat (R3).
        e. Maple, natural unfinished (M0).
        f. Maple, natural, clear top coat (M1).
        g. Maple, red oak stain, clear top coat (M2).
        h. Maple, cherry stain, clear top coat (M3).

2.5 BED LOCATORS

Bed Locators: Snap-on-type, aluminum retainer, two molded-plastic bed locator end caps, and two molded-plastic mounting brackets. Mount assemblies at height indicated.
    1. Cover: Rigid, impact-resistant plastic, nominal 0.100 inch (2.5 mm) thick, in dimensions and profiles indicated.
    2. Retainer: Continuous, one-piece, extruded aluminum retainer, nominal 0.08 inch (2.0 mm) thick.

SELECT BED LOCATOR MODEL

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    3. **B140 Series:** 3-1/2 inch (89 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
    4. **B150 Series:** 3-1/2 inch (89 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
    5. Accessories: Two prefabricated, injection-molded plastic bed locator end caps with concealed splices, cushions, mounting hardware, and other accessories as required. End caps: Match plastic cover color.
    6. Color: As selected.

2.6   CORNER GUARDS

A.   Surface-Mounted, Resilient Plastic Corner Guards:
1.   Cover: Rigid, impact-resistant plastic, nominal 0.078 inch (1.9 mm) thick, in dimensions and profiles indicated.
2.   Retainer:
   a.   Continuous, one-piece, extruded aluminum retainer, nominal 0.062 inch (1.6 mm) thick.
   b.   Continuous, one-piece, extruded plastic retainer, nominal 0.062 inch (1.6 mm) thick (Specify specific model number: G160).

SELECT SURFACE MOUNTED CORNER GUARD MODEL

3.   **G100 Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm).
4.   **G160 Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm), plastic retainer, low- to medium-impact.
5.   **G110 Series:** End wall condition with two G100 corner guards with high impact filler between.
6.   **G200 Series:** 3 inch (76 mm); Corner Radius: 1/4 inch (6.35 mm).
7.   **G400 Series:** 2-11/16 inch (70 mm); Corner Radius: 1-1/4 inches (27.8 mm).
8.   **G410 Series:** End wall condition with two G400 corner guards with high impact filler between.
9.   Accessories: Prefabricated aluminum retainer with concealed splices, mounting hardware, and other accessories as required.
   End caps:
   (1)   Match plastic cover color.
   (2)   Field adjustable for close alignment with snap-on plastic covers.
10.   Color: As selected.

B.   Flush-Mounted, Resilient Plastic Corner Guards:
1.   Cover: Rigid, impact-resistant plastic, nominal 0.078 inch (2.0 mm) thick, in dimensions and profiles indicated.
2.   Retainer: Continuous, one-piece, extruded aluminum retainer, nominal 0.062 inch (1.6 mm) thick.

SELECT FLUSH MOUNTED CORNER GUARD MODEL

3.   **R100 Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm).
4.   **R110 Series:** 2 inch (50 mm) end of wall type; Corner Radius: 1/4 inch (6.35 mm).
5.   **R120 Series:** 2 inch two-hour Fire Barrier mounted on aluminum retainer.
6.   **R400 Series:** 3 inch (76 mm); Corner Radius: 1/4 inches (27.8 mm).
7.   **R410 Series:** 3 inch (76 mm) 135 degree type; Corner Radius: 1/4 inches (27.8 mm).
8.   **R420 Series:** 3 inch two-hour Fire Barrier mounted on aluminum retainer.
9.   Accessories: Aluminum base with concealed splices, mounting hardware, and other accessories as required.

NOTE: END CAP IS ONLY USED WITH SURFACE-MOUNTED CORNER GUARDS

10.   Color: As selected.

C.   Surface-Mounted Plastic Corner Guards: Thermoformed, embossed, resilient plastic acrylic modified vinyl sheet corner guards, height as indicated. Provide 90˚ turn, unless otherwise indicated, and formed edges.
1.   Wing Size: As indicated.

COORDINATE WING SIZE ON DRAWINGS

2.   Mounting Method: Recommended contact cement, construction adhesive, or double-faced self-adhesive foam tape.
3.   Color: As selected.
4.   Coordinating Design: As selected.

D. Extruded Corner Guards: Adhered 90° high-impact extruded vinyl acrylic corner guards, nominal 0.078 inch (2 mm) thick. ASTM E 84 Class I fire rating. Corner radius 1/4 inch (6 mm).
   1. **G875 Series:** 3/4 inch (19 mm).
   2. **G815/G915 Series:** 1-1/2 inch (38 mm).
   3. Adhesive and Primer: As recommended by manufacturer.
E. Lexan™ Corner Guards: Screw-mounted 90° high-impact polycarbonate corner guards, in clear and a variety of colors. Corner radius 1/8 inch (3 mm).
   1. **J034 Series:** 3/4 inch (19 mm).
   2. **J118 Series:** 1-1/8 inch (29 mm).
   3. **J112 Series:** 1-1/2 inch (38 mm).
   4. **J200 Series:** 2 inch (51 mm).
   5. **J212 Series:** 2-1/2 inch (64 mm).
   6. Mounting Screws: As supplied by manufacturer.
F. Stainless Steel Corner Guards: Adhered or screw-mounted 90° type 304 stainless steel corner guards, 16 gauge thick with #4 Satin finish. Corner radius 1/4 inch (6 mm).
   1. **GS10 Series:** 1 inch (25 mm).
   2. **GS15 Series:** 1-1/2 inch (38 mm).
   3. **GS20 Series:** 2 inch (51 mm).
   4. **GS25 Series:** 2-1/2 inch (64 mm).
   5. **GS30 Series:** 3 inch (76 mm).
   6. **GS35 Series:** 3-1/2 inch (89 mm).
   7. Adhesive (Screws): As recommended by manufacturer.

2.7 WOOD HANDRAILS AND CHAIR RAILS

A. Bumper Rail Type Wood Handrails: Handrail fabricated of solid wood with integral vinyl bumper or insert. 1-1/2 inch (38 mm) clear from wall.

SELECT WOOD HANDRAIL MODEL

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   1. **HW20 Series:** Rounded hand grip - 5-1/2 inch (140 mm) high by 1-1/2 inch (38 mm) wide with flexible vinyl bumper.
   2. **HW20-TP Series:** Rounded hand grip - 5-1/2 inch (140 mm) high by 1-1/2 inch (38 mm) wide with Traffic Patterns® insert.
   3. **HW40 Series:** Angular hand grip - 5-1/2 inch (140 mm) high by 1-1/2 inch (38 mm) wide with flexible vinyl bumper.
   4. **HW40-TP Series:** Angular hand grip - 5-1/2 inch (140 mm) high by 1-1/2 inch (38 mm) wide with Traffic Patterns insert.
   5. **HW60 Series:** Rounded hand grip - 6-3/8 inch (162 mm) high by 1-1/2 inch (38 mm) wide with 4 inch (100 mm) high impact-resistant vinyl bumper.
   6. Mounting Brackets: Wood finish to match handrail (Specify HW20 or HW40). Injection-molded plastic (Specify HW60).
   7. Outside Corners: Solid Wood, Field fabricated (Factory cut) (Specify HW20 or HW40). Solid Wood, Factory fabricated (Specify HW60).
   8. Ends: Solid wood, Field fabricated (Factory cut) (Specify HW20 or HW40). Solid wood, Factory fabricated (Specify HW60).
B. Wood Handrail: Round handrail fabricated of solid wood. 1-1/2 inch (38 mm) clear from wall.
   1. **HW70 Series:** 1-1/2 inch (38 mm) diameter.
   2. **HW7S Series:** 1-1/2 inch (38 mm) diameter.
   3. **HW7P Series:** 1-1/2 inch (38 mm) diameter.
   4. Mounting Brackets: Prefabricated, injection-molded plastic. Color: As selected. (Specify HW70). Stainless steel components with Satin finish (Specify HW7S). Powder coated metal (Specify HW7P).
   5. Outside Corners: Field fabricated (Factory cut) (Specify HW70). Stainless steel with Satin finish (Specify HW7S). Powder coated metal (Specify HW7P).
   6. Inside Corners: Stainless steel with Satin finish (Specify HW7S). Powder coated metal (Specify HW7P).

7.   Ends: Solid wood, Field fabricated (Factory cut), match handrail (Specify HW70). Stainless steel with Satin finish (Specify HW7S). Powder coated metal (Specify HW7P).

C.   Wood Chair Rails: Fabricated of solid red oak or maple with integral bumper.

SELECT WOOD CHAIR RAIL MODEL

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1.   **BW20 Series:** 5-1/2 inch (140 mm) high by 3/4 inch (19 mm) wide solid wood chair rail with curved top and vinyl bumper.
2.   **BW30 Series:** 2-1/8 inch (54 mm) high by 3/4 inch (19 mm) wide solid wood chair rail with vinyl insert.
3.   **BW40 Series:** 5-1/2 inch (140 mm) high by 3/4 inch (19 mm) wide solid wood chair rail with angular top and vinyl bumper.
4.   **BW50 Series:** 3 inch (83 mm) high by 3/4 inch (19 mm) wide solid wood chair rail with angular top and vinyl insert.
5.   **BW60 Series:** 3-1/4 inch (83 mm) high by 3/4 inch (19 mm) wide solid wood chair rail with curved top and vinyl bumper.
6.   **BW70 Series:** 6 inch (150 mm) high by 1 inch (25 mm) wide solid wood chair rail with curved top and bottom and two vinyl bumpers.
7.   **BW80 Series:** 5-3/4 inch (146 mm) high by 13/16 inch (21 mm) wide solid wood accent rail with curved top and high impact rail.
8.   **BW90 Series:** 3-1/4 inch (83 mm) high by 3/4 inch (19 mm) wide solid wood chair rail, symmetrical with vinyl bumper.
9.   Ends: Solid wood, factory cut, match chair rail.

SELECT WOOD SPECIES AND FINISH

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10.   Wood Finish:
   a.   Red oak, natural unfinished (R0).
   b.   Red oak, natural, clear top coat (R1).
   c.   Red oak, red oak stain, clear top coat (R2).
   d.   Red oak, cherry stain, clear top coat (R3).
   e.   Maple, natural unfinished (M0).
   f.   Maple, natural, clear top coat (M1).
   g.   Maple, red oak stain, clear top coat (M2).
   h.   Maple, cherry stain, clear top coat (M3).
   i.   Poplar, finish as specified.
   j.   Eucalyptus, finish as specified.
   k.   Ash, finish as specified.
   l.   Cherry, finish as specified.
11.   Integral Bumpers:
   a.   1-7/16 inch (36 mm) high flexible vinyl in aluminum retainer.
   b.   **HW20-TP / HW40-TP:** 5-1/2 inch (140 mm) high Traffic Patterns insert.
   c.   **HW60:** 4 inches (100 mm) high impact vinyl cover.
   d.   **BW80:** 4 inches (100 mm) high impact vinyl cover with aluminum retainer.
   e.   Color / Pattern: As selected.

2.8   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.

DETERMINE TYPE AND SELECT SHEET OR ROLL AND WALLCOVERING THICKNESS

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1.   **500 Series:** Solid colors.
   a.   Sheet/Roll Thickness: 0.028 inch (0.7 mm) thick, Class I/A Fire-Rated.
   b.   Sheet/Roll Thickness: 0.040 inch (1.0 mm) thick, Class I/A Fire-Rated.
   c.   Sheet Thickness: 0.060 inch (1.5 mm) thick, Class I/A Fire-Rated.
   d.   Sheet Thickness: 0.080 inch (2.0 mm) thick, Class II/B Fire-Rated.
   e.   Sheet Thickness: 0.125 inch (3.2 mm) thick, Class II/B Fire-Rated.

2. **600 Series:** Solid colors.
 a. Sheet Thickness: 0.080 inch (2.0 mm) thick, Class I/A Fire-Rated.
 b. Sheet Thickness: 0.125 inch (3.2 mm) thick, Class I/A Fire-Rated.
3. Color: As selected.
B. Semi-Rigid Laminated Sheet Wallcovering: Semi-rigid, embossed, impact-resistant, capped vinyl-plastic sheets. Comply with Class I/A fire performance characteristics and be chemical- and stain-resistant.
 1. **Traffic Patterns® Series:** Polyvinyl fluoride film-capped Sheet Thickness: 0.030 inch (0.76 mm) thick.
 2. **Traffic Weave™ Series:** Polyvinyl fluoride film-capped, 33 oz. fabric-backed wallcovering.
 3. **Korowood™ Series:** Sheet Thickness: 0.030 (0.8 mm) or 0.040 inch (1.2 mm) thick.
 4. Pattern and/or Color: As selected.

COORDINATE ACCESSORY MOLDINGS WITH DRAWING DETAILS, IF ANY

C. 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.
D. Color Matched Caulk: Manufacturer's standard.
E. Adhesive and Primer: As recommended by manufacturer.

COORDINATE WITH SECTION 08 71 00 DOOR HARDWARE. SELECT SIZES SHOWN BELOW OR INDICATE CUSTOM SIZE REQUIRED.

2.9 DOOR PROTECTION SYSTEMS

A. Door Surface Protection: Comply with requirements of ANSI A156.6. 0.040 inch thick (0.028, 0.060, 0.080). Provide the following standard sizes or custom sizes as indicated:
 1. Kick Plate: 8 inches (200 mm) high by 1 inch (25 mm) less than door width.
 2. Kick Plate: 10 inches (250 mm) high by 1 inch (25 mm) less than door width.
 3. Kick Plate: 12 inches (300 mm) high by 1 inch (25 mm) less than door width.
 4. Armor Plate: 32 inches (800 mm) high by 1 inch (25 mm) less than door width.
 5. Armor Plate: 48 inches (1200 mm) high by 1 inch (25 mm) less than door width.
 6. Push Plate: 12 inches (300 mm) high by 3 inches (75 mm) wide.
 7. Push Plate: 15 inches (375 mm) high by 3-1/2 inch (89 mm) wide.
 8. Push Plate: 16 inches (400 mm) high by 4 inches (100 mm) wide.
 9. Color: As selected.
B. Stainless Steel Door Surface Protection: Adhered or screw-mounted 304 stainless steel, 16 gauge thick with #4 Satin finish. Provide the following standard sizes or custom sizes as indicated:
 1. Kick Plate: 8 inches (200 mm) high by 1 inch (25 mm) less than door width.
 2. Kick Plate: 10 inches (250 mm) high by 1 inch (25 mm) less than door width.
 3. Kick Plate: 12 inches (300 mm) high by 1 inch (25 mm) less than door width.
 4. Armor Plate: 32 inches (800 mm) high by 1 inch (25 mm) less than door width.
 5. Armor Plate: 48 inches (1200 mm) high by 1 inch (25 mm) less than door width.
 6. Push Plate: 12 inches (300 mm) high by 3 inches (75 mm) wide.
 7. Push Plate: 15 inches (375 mm) high by 3-1/2 inch (89 mm) wide.
 8. Push Plate: 16 inches (400 mm) high by 4 inches (100 mm) wide.
 9. Adhesive (Screws): As recommended by manufacturer.
C. Door Frame Protection: 0.040 inch (0.060) rigid, impact-resistant, thermoformed vinyl plastic with return legs. Comply with fire performance characteristics specified and be chemical- and stain-resistant.
 Color: As selected.

D.   Door Frame Guard: Door frame guard mounted on continuous aluminum retainer. High-impact vinyl extrusion locked in place, nominal 0.10 inch (2.5 mm) thick. ASTM E 84 Class I fire rating.
1. Extrusion: Pebble grain finish.
2. Retainer: Continuous 6063-T5 aluminum retainer behind entire height of door frame guard, minimum 0.060 inch (1.5 mm) thick.
3. F360 Series: 2-11/16 inch (70 mm); Corner Radius: 1-1/4 inch (27.8 mm).
4. End Caps: Injection molded unit of color and texture similar to profile extrusion.

2.10 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 components 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 fittings, and anchors for interconnection of members to other construction.

PART 3 - EXECUTION

3.1 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 wall covering 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.

3.2 PREPARATION

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

3.3 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.

3.4 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.

END OF SECTION

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