

102600-H: WALL PROTECTION

RELATED SECTIONS

Please refer to these related Michigan Medicine FPD Design Guidelines:

Special Instructions to Designers:

- 5.13 MM Healthcare Procedure Room Infection Control Types and Requirements
- 5.14 MM Patient Care and Support Spaces Room Type Requirements
- 5.15 MM Patient and Staff Protection: Falls, Bariatrics, Low Vision, Ergonomics
- 5.16 MM Requirements for Critical Pressure Sensitive Rooms
- 5.17 MM Requirements for Pharmaceutical Drug Compounding Areas

Technical Requirements:

- 010000H Architectural General Design Guidelines
- 06040H Architectural Woodwork
- 079200 Joint Sealant
- 092116H Gypsum Board Assemblies
- 093000H Ceramic Tile and Wall Protection at Wet Locations

8.2 MM Architectural Preferred Manufacturers List

GENERAL

In general, follow the guidelines below when designing and specifying impact resistant wall protection. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

1. All material selections and product selections shall be coordinated with MM Design Manager and Interior Design. All color selections shall be by MM Interior Design. For further information on MM Interior Design Guidelines see [here](#).
2. On renovation projects, care should be taken to extend new materials to the nearest corner or other natural break.
3. Interior Finish materials must meet class "A" interior finish requirements for flame spread and smoke developed.
4. Wall protection should be provided at all public and service corridors, patient treatment rooms, patient exam rooms, equipment storage rooms in Healthcare and Ambulatory Healthcare Occupancies. Wall protection should be provided at waiting rooms, conference rooms, reception areas and nurse stations. Wall protection at offsite locations is highly recommended.
5. Waterproof wall materials must be provided at all wet locations, including the wall plumbing fixtures are installed on; kitchens; soiled utility rooms; decontamination rooms, restrooms
6. Wall protection should be sealed, smooth and easily cleanable at Operating Rooms, pharmacy, decontamination and reprocessing rooms.
7. Coordinate mounting heights of switches, electrical outlets, paper dispensers, hand sanitizers and other wall mounted items, so that the items are either above or below the top of the wall protection..
8. Consider the size and height of equipment and carts when specifying wall protection

DESIGN REQUIREMENTS

General: Blocking should be provided behind the gypsum board at handrails and, crash rails.

1. **Wall protection falls into several categories:**
 - a. Handrails
 - b. Crash Rails (Wall bumpers)
 - c. Corner Guards.

- d. Sheet wall protection
2. **Handrails:** A solid, one-piece handrail system is preferred. Handrail ends should return to the wall. Be certain that color matching is within acceptable ranges between corner pieces and main runs. Handrails may be hardwood or impact resistant.
- a. Maple Wood with natural finish. Returns would have mitered angle returning to the wall along with an additional leg of approx. 3-1/2" which would return on the face of the handrail. Endcaps are to be field spliced to the run of handrail by the installer.
 - b. Stainless steel or aluminum systems.
 - c. Impact resistant material on continuous aluminum retainers, with a single color, no insets and limited seams, with a one-piece curved return to the wall.

Impact resistant handrail below, with sheet impact resistant wall covering without trim:



Natural Maple Handrail below



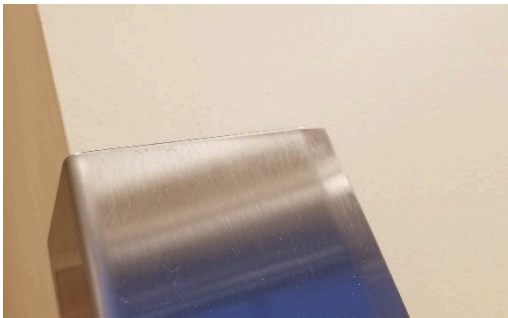
3. Crash Rails: May be stainless steel, impact resistant, or wood.

The height of carts and traffic should be considered when specifying crash rails, note bad examples below:



4. **Corner Guards:** May be impact resistant peel and stick on a retainer, or stainless steel. Use surface-mounted rather than recessed in renovation projects. Corner guards should start at the top of the wall cove base and extend full height to the ceiling unless matching existing. Corner Guards should be specified at all corridor outside corners, and all outside corners in rooms subject to heavy cart, staff and patient traffic. Use 3" in widthwide impact resistant corner guards except unless at wing walls. Impact resistant corner guards must be installed with all manufacturers recommended hardware and per manufacturer's instructions. End caps at wing walls should cover the entire width of the wing wall end. Stainless steel corner guards should be 10 12 gauge and be profiled to should hug the wall with no sharp edges or corners. Stainless steel corner guards should be sealed to the wall with silicon sealant to cover all gaps. Back butter stainless steel corner guards with full coverage of adhesive. Fasteners are acceptable at the top and bottom of corner guards only.

A good example of a stainless steel corner guard profile:



Shock absorbing corner guards on an aluminum retainers tend to slip easily. Below is a bad example

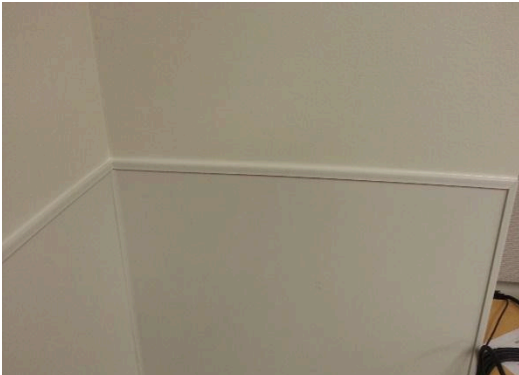
Shock absorbing impact resistant end caps should not be specified; instead specify stainless steel.



5. Impact Resistant Sheet Wall Protection:

Impact resistant rigid wall covering for dry locations: Usually use 0.060-inch thickness rigid sheets. Consider use at service areas, corridors, and in wheelchair and equipment storage alcoves where budget is a concern. Typically, no additional trim is installed, and joints are caulked. The product should run from corner-to-corner, and a full wainscot to approx. four feet AFF is preferred. Narrow rub rails should be minimized. Height and trim details are to be coordinated with FPD on an individual project basis.

Below is a good example of an impact resistant rigid wall covering with matching trim.



Below is an example of a rub strip; not preferred.

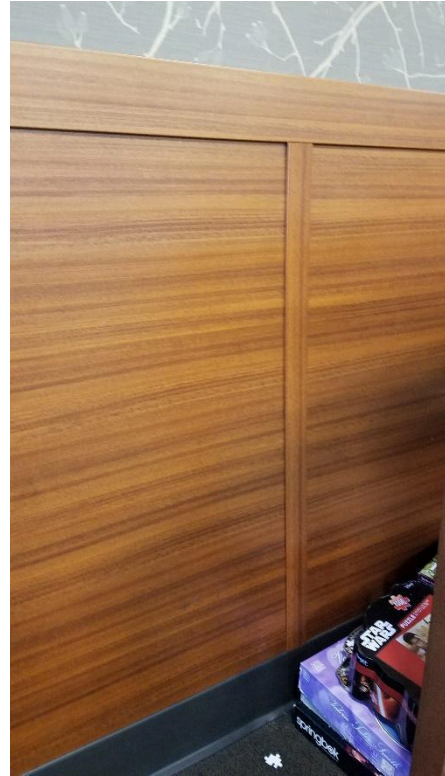
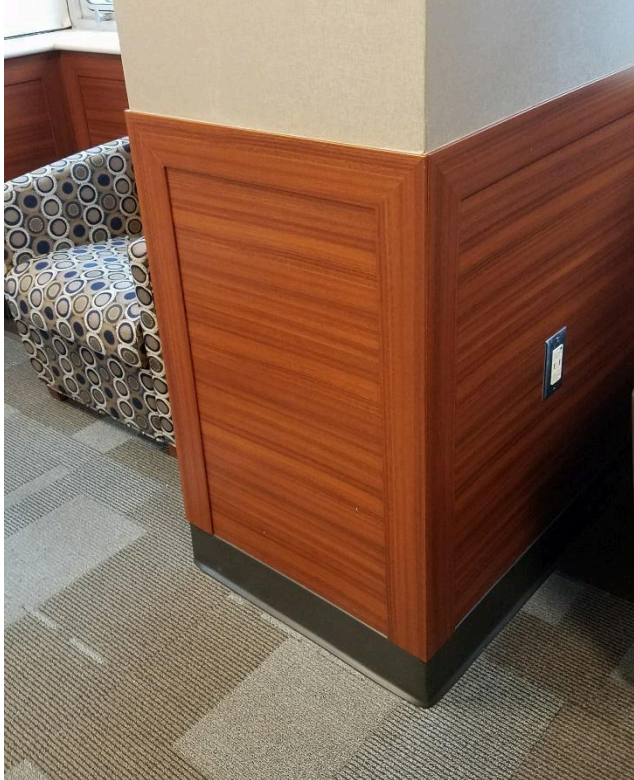


Note poor detailing of metal wall protection trim below, and lack of corner guard leading to damage



6. **Impact resistant decorative wall wainscots** are often specified for public corridors, conference rooms and similar spaces. The dimensional trim should be carefully detailed, including mitered corners at exposed edges, joints with cabinetry, corner guards, wall base and cabinetry must be carefully detailed.

Note mitered corners and running joint treatments at photos below:



Note careful detailing and mitered corners below:



Without mitered trim, the unfinished edge is exposed:



Vertical joints in decorative wall protection materials with any movement must should have a trim covering. A caulk joint cannot handle the movement of the materials.



- 7. Smooth Fiber Reinforced Plastic (FRP) sheets** with narrow tooled caulk joints are suggested for Operating Rooms, Pharmacy clean rooms and other areas that must be washed frequently.



8. **Textured (Pebbled) Fiber Reinforced Plastic sheets** may be used for service corridors, hallways, janitor closets, equipment storage and other back of the house areas. The vertical batten ("T" strip) trim should not be specified as it is easily damaged, and instead a narrow, carefully tooled caulk joint be installed at vertical joints.

Note preferred sealant joint in photo below. Typical joint for smooth or textured FPR.



Batten ("T" trim) at FRP that has been damaged (below)



9. **Solid surface material** is often used at headwalls and some wet locations. All field joints should be chemically bonded and invisible.



Plywood or similar material should be installed behind headwall to prevent cracking under impact



10. **Stainless Steel** should be specified for Cart Wash and Dishwashing rooms. It should be specified with the manufacturer's trim and must be sealed to the wall surface.
11. **Re-finishing:** High Impact wall protection is designed to be factory finished. It is not intended to be painted, and should not be painted, except under certain circumstances.
 - a. Flat sheet wall protection: Where a neutral color flat sheet stock is installed on a neutral colored painted wall, it does not need to be painted. Where neutral wall protection is installed wall-to-wall on an accent wall, it typically does not need to be painted. If neutral sheet wall protection is installed as a patch on an accent wall, such as within an inpatient room, it will be caulked and painted to match the wall.
 - b. Corner Guards, Crash Rails, Handrails: Should not be painted.