

# **Floor Openings, Open Sides, Ramps, and Hatchways**

**MSC-PRAC-30495**

**Revision 0**

**Effective Date: January 15, 2010**

**Topic: Safety and Health**

## Floor Openings, Open Sides, Ramps, and Hatchways

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**PURPOSE** This practice identifies a key aspect of the Safety and Health (S&H) program that establishes requirements for walking/working surfaces.

**SCOPE** This practice includes the following major sections:

- General Requirements
- Floor and wall openings
- Stairways
- Floor and roof strength

**NOTE:** *Specific design requirements for emergency egress are found in the National Fire Protection Association 101 Life Safety Code and are not covered in this practice.*

The requirements of this practice are consistent with the requirements published in the Hanford Mission Support Contract (MSC) Safety and Health virtual manual.

**APPLICATION** This practice applies to Mission Support Alliance (MSA) construction personnel.

**GENERAL REQUIREMENTS** Records generated during the performance of this activity are to be included in the Construction Work Package and will be managed in accordance with [MSC-PRAC-30374](#), *Construction Work Package* and [MSC-PRAC-30376](#), *Construction Document Control*.

**FLOOR AND WALL OPENINGS** Guard stairway and ladderway floor openings by installing a standard railing on all exposed sides except at access openings. Provide toeboards at exposed ladderway sides. Protect entrances by swinging gate, chain, or offsetting the entrance so that persons cannot walk directly into the opening.

Provide manhole floor openings, temporary floor openings, or floor holes with a proper cover, or guard on exposed sides by standard guardrails and toeboards where required.

CLEARLY mark “Hole Cover – Do Not Remove” on floor opening covers.

Properly guard wall openings and chutes where there is a drop of 1.2 meters (4 feet) or more to prevent falls. Provide a toeboard or equivalent protection where there is exposure below to falling materials.

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Properly guard window wall openings at a stairway landing, floor, platform, or balcony, where there is a drop of 1.2 meters or more, and where the bottom of the opening is less than 915 millimeters (3 feet) above the platform or landing. If the window opening is below the landing or platform, provide a standard toeboard.

Open-sided floors or platforms 1.8 meters (6 feet) or more above the adjacent floor or ground level are guarded on all open sides by a standard railing or the equivalent, except where there is an entrance to a ramp, stairway, or fixed ladder.

### STAIRWAYS

Provide stairs, ladders, or ramps for elevated areas used on a routine basis.

Provide handrails for stairs with 4 or more risers or those over 760 millimeters (30 inches) high. A landing is provided where doors or gates open directly onto a stairway.

### FLOOR AND ROOF STRENGTH

Ensure that the facility landlord has confirmed that floors have the structural strength to support the intended work activities and equipment or storage anticipated for the area.

Post securely fixed load capacity signs on elevated floors or storage areas, and ensure visibility to personnel. Posted load capacities are not exceeded.

**NOTE:** *Post the area design load limit in areas where the load amount and location is changing, such as in storage areas on elevated floors or above basements. Grade or slab construction does not require posting floor-loading limits.*

Fireproof or security-type cabinets and floor-to-ceiling retrieval systems may exceed the concentrated load limit in an office. Contact a structural engineer when additional loading is being considered or when there is a change to storage occupancy.

Ensure that the roof is strong enough to support the intended work activities and equipment use anticipated for the project when a roof becomes a walking/working surface.

Ensure that the roof passes required inspection/assessments in accordance with practice [MSC-PRAC-30498](#), *Roof Assessment Process* before access is authorized.

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**FORMS**                      None

**RECORDS  
IDENTIFICATION**

**Records Capture Table**

<b>Name of Document</b>	<b>Submittal Responsibility</b>	<b>Retention Responsibility</b>
Construction Work Package	Construction Supervisor/Superintendent (CS/S)	Project Document Control

**REFERENCES**

[MSC-PRAC-30374](#), *Construction Work Package*  
[MSC-PRAC-30376](#), *Construction Document Control*  
[MSC-PRAC-30498](#), *Roof Assessment Process*