DESIGN GUIDELINE 4.8

FALL PROTECTION ON ROOFS

General

This section specifically includes design requirements and standards for fall protection measures on roofs and skylights. It does not address temporary fall protection measures to be utilized during construction. It also does not address policies and procedures for employee fall protection.

References

Comply with the following:

MIOSHA Part 45 Fall Protection Standard for Construction Industry
MIOSHA Part 2 Wall and Floor Openings, Stairways and Skylights
ANSI/ASSE Z359.1-2007, Parts 3 and 5 and Z359.2-2007, Part 5

Related Sections

UM Design Guideline Sections:
6.0 DG 075000 Roofing Systems

Design Requirements

Design rooftop areas containing a fall hazard of greater than four feet with specific regard to fall protection. Comply with the following passive protection measures wherever possible:

- Locate equipment (including roof drains) a minimum of fifteen feet from the edge of the roof. This includes any pathways to or around the equipment.
- Include permanent structures such as parapet walls or guard rails together with toe boards at a height of 42" above the roof surface. Note that the guard rails can form a perimeter around the equipment rather than being mounted at the edge of the roof.

If the project budget or architectural considerations preclude using one of the two methods above, obtain the approval of the Design Manager to substitute a permanently mounted anchorage system and/or a horizontal lifeline system for personal fall arrest complying with the following:

- The anchorage system must be designed by a qualified engineer and installed under the supervision of a qualified competent individual.

- The anchorages must be located a minimum of fifteen feet from the roof edge and must be easily accessible.
- The interval between tie-offs must be spaced no more than fifty feet apart.
- Anchorages must be situated so as to minimize the fall distance and the possible damage to fall arrest lanyards from nearby sharp or rough edges.
- Anchorage points must be independent of any anchorage being used to support or suspend platforms.

Appropriate fall protection should also be provided for skylights. Guards and/or screens must comply with MIOSHA regulations.

Anchorage points are mandatory for steep pitch roofs (greater than 4:12), whether or not passive protection is also provided.