FACT SHEET

Standard: Fall Protection

ROOFTOP FALL PROTECTION GUIDANCE

EH&S acknowledges the varied nature of work on roofs, uncertain frequency of exposure, wide range of potentially hazardous conditions, and the confusion among trades groups, service providers, and building owners and managers on classifying activity and choosing appropriate fall protection alternatives.

In order to enhance safe work practices, EH&S is recommending the following guideline on rooftop fall protection:

New Construction: Flat, Low Sloped Roofs

- In the design phase for new buildings, identify mechanicals that do not require specific rooftop placement and locate at least 15 feet from the leading edge.
- If mechanicals are required on the rooftop or above occupied levels, design to house critical equipment within rooftop penthouse enclosures.
- If mechanicals are required on the rooftop or above occupied levels and cannot be housed within rooftop (penthouse) enclosures, surround equipment with a conforming parapet wall or standard railing.
- On roofs with mechanicals, rated/fixed anchor point systems may be installed as a supplement to conforming parapet wall or standard railing to provide fall protection for miscellaneous activities (window washing, snow and ice removal, drain cleaning, etc.).
- On roofs without mechanicals, rated/fixed anchor point systems may be installed providing fall protection for miscellaneous activities (window washing, snow and ice removal, drain cleaning, etc.).

Existing Buildings: Flat, low sloped roofs **with mechanicals** not currently protected by standard railing or conforming parapet.

- Implement administrative controls: Lock all access doors or other points to the roof and post standard Harvard signs stating that roof access is not allowed unless authorized by the building manager.
- If possible, install standard railings (passive) around the entire perimeter of the roof.
- If installing standard railings for the entire roof is not possible, then establish warning lines as described above to mark the pathway to and around any work area greater than 15 feet from leading edge and install standard railings around equipment less than 15 feet from the leading edge. **Personnel on roof are not permitted to cross the warning line or railings.**
- Fixed anchor point systems may be installed as a supplement to conforming parapet walls or standard railings to fall protection for miscellaneous activities (window washing, snow and ice removal, drain cleaning, etc.).
- If standard railings or warning lines cannot be installed due to restrictions (historic commission, etc.), then install hardware permitting the use of safety harnesses (active fall protection - anchor points, horizontal lifelines, etc.).

Existing Buildings: Flat, low sloped roofs **without mechanicals** not currently protected by standard railing or conforming parapet.

- On roofs without mechanicals, rated/fixed anchor point systems may be installed providing fall protection for miscellaneous activities (window washing, snow and ice removal, drain cleaning, etc.).

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Diagrams below demonstrate how different fall protection elements and strategies may be implemented:

Warning Line
Railing
Fixed Ladder
Anchor Point

DIAGRAM 1

- Access door and HVAC < 15 feet from leading roof edge

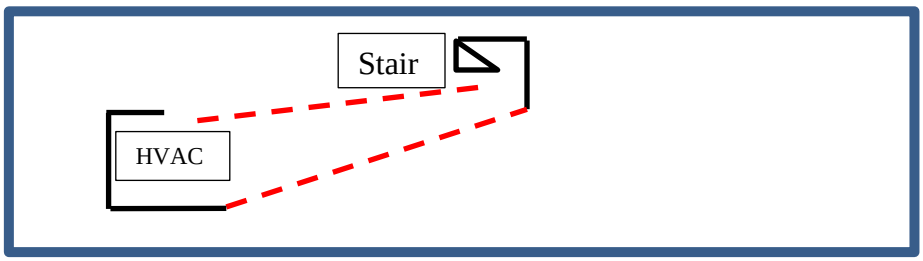


DIAGRAM 2

- Fixed ladder roof access < 15 feet from leading roof edge;
- All HVAC units > 15 feet from leading roof edge

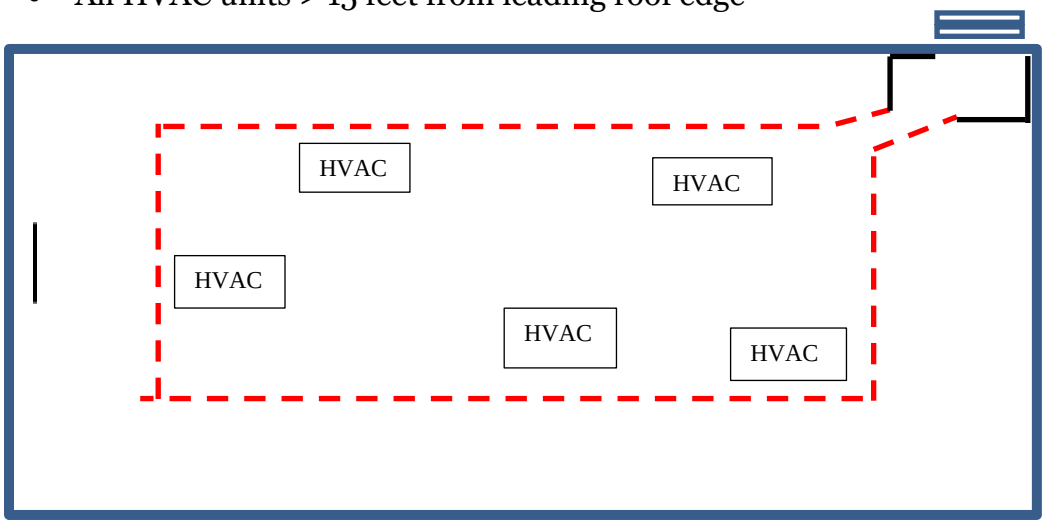


DIAGRAM 3

- Access hatch – All hatches must be protected by guardrail
- Upright solar panels > 42 inches. Provides adequate fall protection.
- All unrated skylights must be protected by rail or rated screens

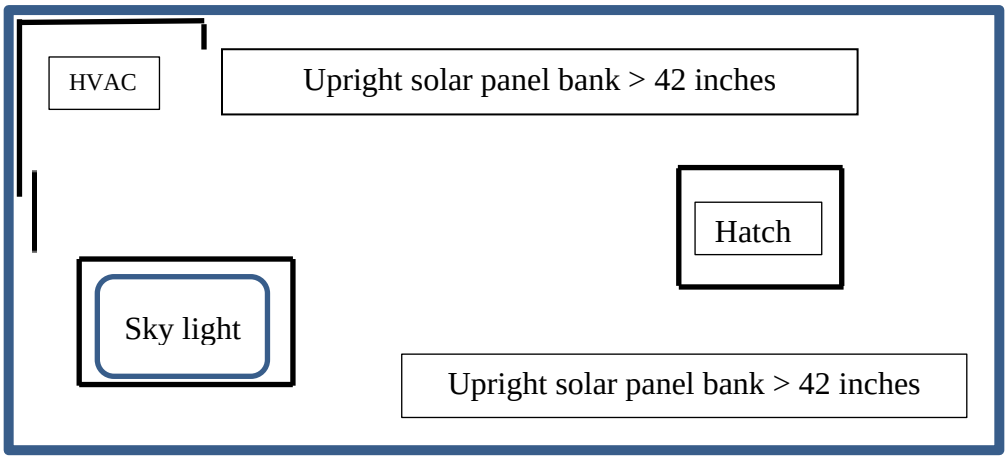


DIAGRAM 4

- Access door and HVAC < 15 feet from leading roof edge
- Non-conforming parapet < 36 inches requires rail or anchor points

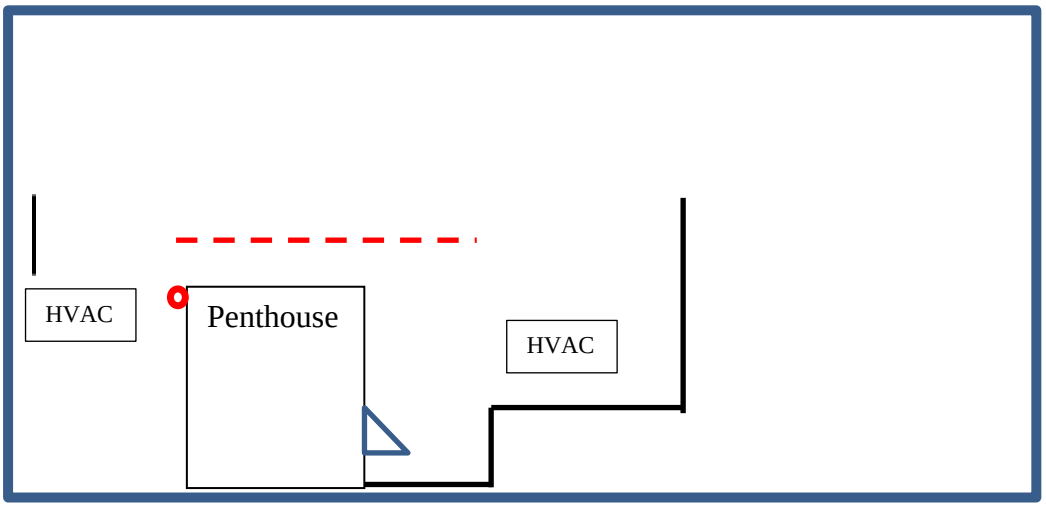
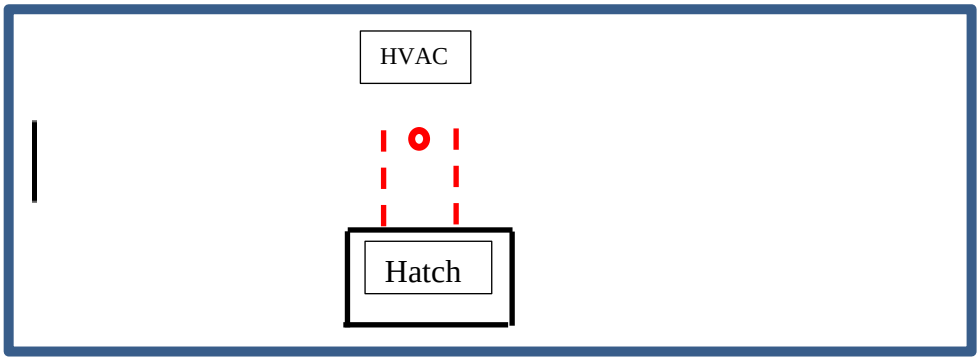


DIAGRAM 5

- Access hatch – All hatches must be protected by guardrail
- Warning line to anchor point
- Anchor point at 15 feet to leading edge



Critical Point to Remember:

- Lock all access doors or other points of access to the roof and post standard Harvard fall protection warning signs.
- If possible, install standard railings (passive fall protection) around the entire perimeter of the roof.
- If installing standard railings for the entire roof is not possible, establish warning lines to mark the pathway to and around any work area greater than 15 feet from leading edge and install standard railings around equipment less than 15 feet from the leading edge.
- If standard railings or warning lines cannot be installed due to restrictions (historic commission, etc.), then install hardware permitting the use of safety harnesses (anchor points, horizontal lifelines, etc.). These systems may be installed as a supplement to conforming parapet walls or standard railings for miscellaneous activities.

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INSPECTION REQUIREMENTS

Rated /Fixed Anchor Point Systems:

- Systems must be certified before being placed into service/ initial use and shall be detail the rated load capacity and initial certification by the manufacturer.
- System must be visually inspected by authorized person before use each and cannot be used if any defects are present.
- System must be inspected by a competent person at intervals specified by the manufacturer/supplier, but not exceeding 12 months.
- System must be re-certified by or under supervision of registered Professional Engineer (PE) when replacing roof or at periods not to exceed 10 years.
- All inspections and certifications must be documented in a dedicated log book and retained by the building manager.

Railings:

- Railing should be inspected on a periodic basis for signs of deterioration and or damage. Damaged rails are to be clearly marked and promptly repaired.
- Wooden and speed railing should be inspected annually

If you have additional questions please contact your local EH&S Safety Officer.