



Technical Guidance Document

Worker Safety on the Roof

The following guidance addresses hazards when walking and working on the roof using ladders and hand tools for snow related inspection and management activities.

For information on use of mechanized equipment and aerial lifts for snow removal, and avoiding electrical hazards, and the use of fall protection for roof work, see the OSHA publication, *Hazard Alert - Falls and Other Hazards to Workers Removing Snow from Rooftops and Other Elevated Surfaces*, at <https://www.osha.gov/sites/default/files/publications/OSHA-3513roof-snow-hazard.pdf>

Worker Safety on the Ground – At a minimum, safety provisions when working on the roof include the following:

Training - Providing supervisor and staff training (e.g., ladder safety, fall prevention).

- PPE - Identifying and providing PPE for specific types of work
- Communication:
 - Providing equipment for two-way communication
 - Assigning other employees to coordinate and communicate with employees working on the roof, to be available for the entire duration of their time on the roof.

Traveling onto and around the roof:

- Identifying roof access and egress
- Designating travel routes on roof, ideally on walk maps
- Ensuring edge protection is in place where required for the type of access needed. It must be based on the OSHA Fall Protection Standard 1910 for General Industry. The guidance is for work on low-slope roofs based on various distances:

Work conducted less than 6 feet from the roof edge	1910.28(b)(13)(i)
Work conducted is at least 6 feet but less than 15 feet	1910.28(b)(13)(ii)
Work conducted 15 feet or more from the roof edge	1910.28(b)(13)(iii)(A) and 1910.28(b)(13)(iii)(B)

- Requiring employees to maintain designated distance from the edge based on their work, training, and PPE.

Identifying and marking rooftop hazards with flags or other devices:

- Goals
 - 1) prevent injury from trips and falls
 - 2) prevent damage to items buried in snow
 - 3) to know where to clear and access them for inspection and management
- Items to mark:
 - Conduits, gas lines, equipment, lightning protection, etc.
 - Drainage structures - roof drains, gutters, downspouts, scuppers
 - HVAC Vents - intake and exhaust
 - Plumbing and kitchen exhaust vents
 - Skylights and exposed elevator shafts (a particular concern because personnel clearing snow may fall through them if not properly identified and protected as required by OSHA Standard 1910.28.

Directing employees to dress appropriately – at a minimum:

- Wear slip resistant and insulated, waterproof, but breathable footwear
- Dress in layers, with a wind and water-resistant outer layer
- Wear insulated hats and gloves

Directing employees to work safely on ladders:

- Footing - Ensure that the ladder has level and secure footing, as required by 1910.23(c)(4).
- Reduce slip hazards - Check the ladder rungs for ice. Clean snow from footwear before mounting the ladder. A slippery step can cause a fatal fall.
- Properly position the ladder at the correct angle - Place the base of the ladder a distance from the vertical wall equal to one-fourth the working length of the ladder, see 1910.23 (Figure D-1).
- Ensure the ladder is adequately extended - Extend the ladder 3 feet above the upper level (e.g., the roof). If not possible, use ladder rail extensions and secure the ladder to prevent it from slipping or tipping, as required by 1910.23(c)(11).
- Only stand on steps designed for standing - If using an A-frame ladder, do not stand on the top two steps.
- Maintain Balance – instruct employees to:
 - Maintain three points of contact with the ladder – Can be two feet and one hand, alternating with two hands and a foot.
 - Keep the centerline of their body inside the ladder rails - Do not lean or reach so that the body extends outside the rails.
 - Climb up the ladder first and then pull equipment up to the working level with a rope or other appropriate hoisting method or have someone hand it to them. It is NOT safe to carry heavy or bulky objects or loads up a ladder.

Alerting employees to the dangers of nests of stinging insects in HVAC equipment and guidance on how to respond.

Other Safety Tips

- Establish a safety zone below the areas being worked on to ensure workers and others on the ground will not be exposed to snow and ice being removed or dislodged from the roof.
- Identify locations where snow removed from a roof can be stored on the ground away from people, parking, entrances, exits, building equipment, stormwater drains, etc. to prevent blocking pedestrian and vehicle access, creating trip and flooding hazards, damaging hardscape, etc.
- Identify all parties involved in snow removal and management to ensure they are trained, equipped, and assigned to conduct the work safely, and to ensure management of snow doesn't create additional hazards for workers, drivers, and pedestrians on the ground.

Disclaimer: The material contained herein is intended for general informational purposes only. It is not intended as legal advice and should not be construed as such. Any inquiries concerning Massachusetts law should be directed to a city solicitor, town counsel or other licensed attorney.