



SEPARATING PEOPLE FROM HAZARDS

UNDERSTANDING ROOFTOP FALL PROTECTION

A silhouette of a worker wearing a hard hat and walking on a rooftop. The worker is positioned to the left of the main title, and an orange safety railing is visible in front of them.

CANADIAN SAFETY CODES and the **Rooftop Safety Audit**

WHAT EXPERTS LOOK FOR WHEN PERFORMING A ROOFTOP SAFETY AUDIT AND
HOW TO IMPROVE WORKER SAFETY WITH SOLUTIONS THAT EXCEED OH&S COMPLIANCE



May 2019

Canadian Fall Protection Compliance Begins with a Complete Rooftop Assessment

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The Rooftop Safety Audit

According to the Ontario Ministry of Labour:

1 A competent person should assess the risks associated with any job task and identify, control or eliminate any fall hazards.

2 The best option for eliminating a fall hazard is a guardrail system. A worker shall be adequately protected by a guardrail system that meets the requirements of the Regulation for Construction Projects or the Regulation for Industrial Establishments.

3 When the fall hazard cannot be eliminated, then the hazard shall be controlled by using a fall protection system in accordance with the Regulation for Construction Projects or the Regulation for Industrial Establishments.

Discussions on roof safety can be overwhelming regarding Canadian regulations, inspections, and provincial standards. An authorized fall protection professional can help define your requirements and plan a system solution to meet your safety needs.

A Professional Rooftop Safety Audit Provides:

- A prioritized list of areas on the roof that are deemed “critical” by Canadian OH&S
- A detailed action plan for protecting rooftop hazards
- A customized solution that fits the exact needs of the facility
- A documented fall protection presentation to communicate to peers, upper management, or a budget approval board that outlines the roof requirements and fall protection solutions
- An organized budget and estimate of the installation
- A coordinated plan to detail compliance for local, provincial and regional inspectors

Regulations in the Canadian Provinces may vary, but the themes are the same for protecting people when working at height.

To learn more about the codes in your province, please visit the Kee Safety, Canada website at: https://www.keesafety.ca/knowledge-center/fall_protection_legislation

The Hierarchy of Fall Protection

Smarter Solutions for Rooftop Safety

A truly comprehensive rooftop solution follows the Hierarchy of Fall Protection, the gold-standard of safety procedures. An expert starts by inspecting the roof site for potential fall hazards. From there, a complete system solution and recommendations that descend down the four levels of the hierarchy—from simple, sensible approaches for eliminating risks all the way down to lifesaving personal protection systems.

Collective Systems require no additional training to use. Work Restraint and Fall Arrest Systems both require a high level of user competency, training and additional inspection to be used effectively.



How to Assess Risk on the Rooftop

Only a fall protection experts should perform a critical analysis on your rooftop to strategically identify the hazards where your workers are exposed to the greatest risk. This ensures that the most dangerous areas are protected immediately with state-of-the-art systems and OH&S compliant solutions.

A prioritized approach based on the critical danger exposure and how frequently each hazard is accessed by your workers. Outlined in this document is a basic approach. Your roof must be reviewed by a Rooftop Safety Audit expert as each site is unique and your specific roof may require variable solutions.

The Big Four:

- 1 Access Points**
- 2 Rooftop Openings**
- 3 Unprotected Roof Edges**
- 4 Rooftop Obstacles**

- COHS SOR/86-304: Section 2.5
- ON OH&S R.R.O. 1990, Reg 851: Section 13
- Alberta Regulation 87/2009: Sections 130(4) and 314

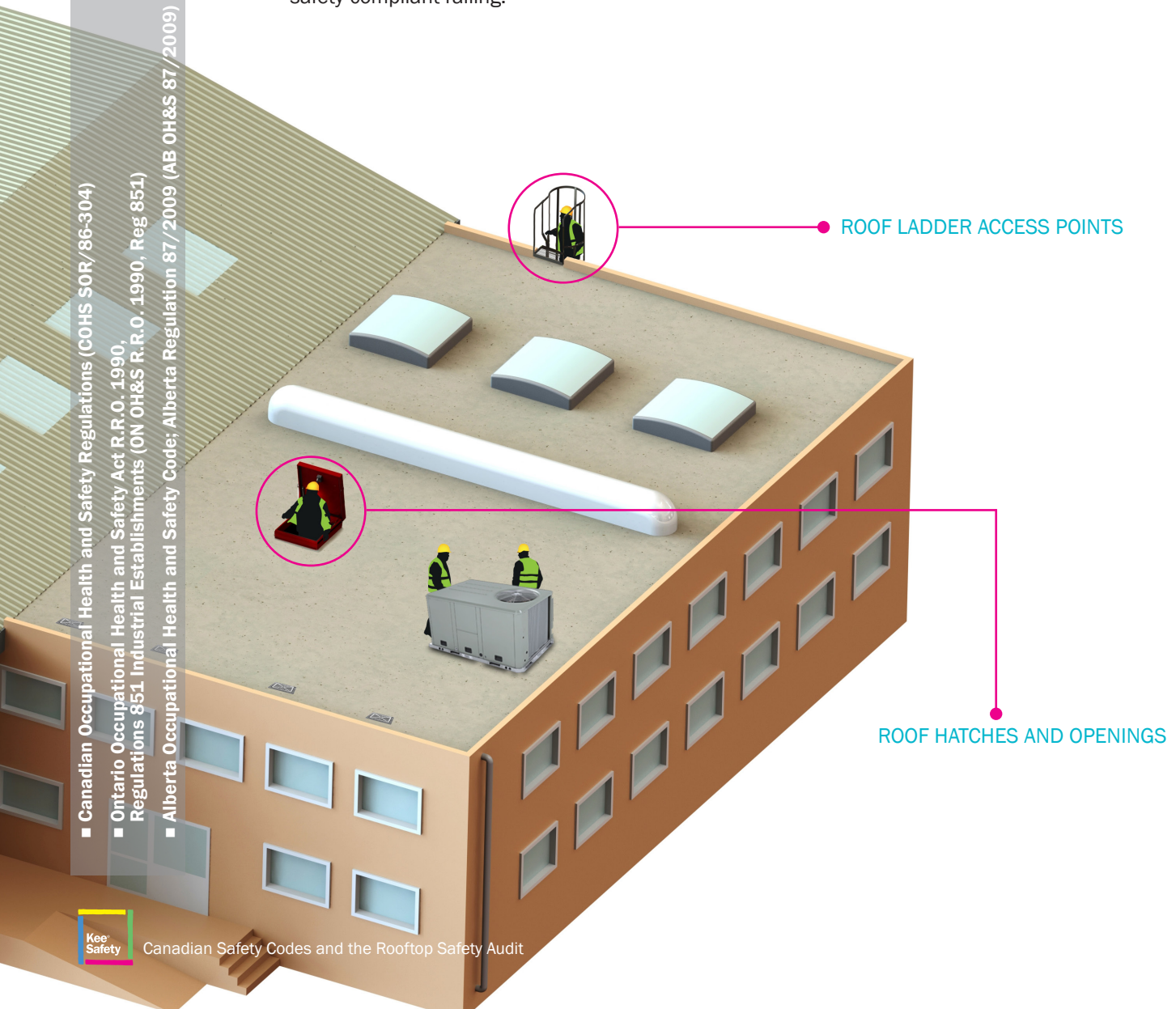
Identifying Danger Zones: Roof Access

Understand how workers get on and off the rooftop

When climbing up onto the rooftop to perform maintenance tasks and when exiting the work zone, there is a high potential to slip or fall. Providing safe egress and ingress for workers is critical.

1 Access Points

Access points are the most frequented hazard on any roof. Your workers are exposed to this risk twice every time they enter and exit to perform tasks. For example, if your worker is required to access the roof 8 times per year, they are exposed to the access hazard 16 times. All ladders and hatches should be secured with a self-closing gate and safety-compliant railing.



- Canadian Occupational Health and Safety Regulations (COHS SOR/86-304)
- Ontario Occupational Health and Safety Act R.R.O. 1990, Regulations 851 Industrial Establishments (ON OH&S R.R.O. 1990, Reg 851)
- Alberta Occupational Health and Safety Code; Alberta Regulation 87/2009 (AB OH&S 87/2009)

- COHS SOR/86-304: Section 2.5
- ON OH&S R.R.O. 1990, Reg 851: Section 13
- Alberta Regulation 87/2009: Section 314

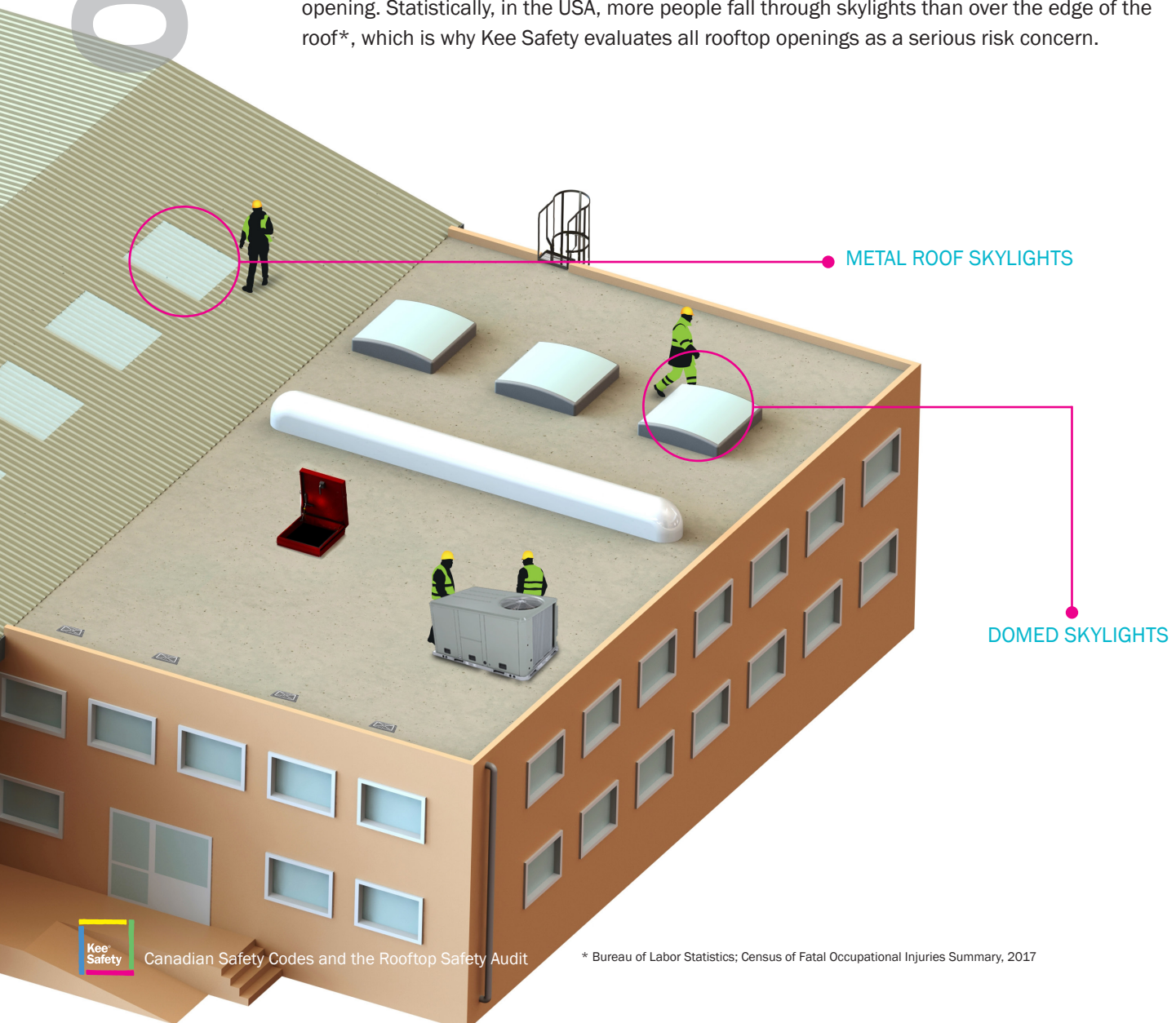
Identifying Danger Zones: Holes in the Roof

Skylights

Skylights present a danger for any individual on the rooftop. Skylights can be considered to be the equivalent of a hole in the roof. Every skylight floor opening and hole must be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

2 Rooftop Openings

Openings are often overlooked, but extremely critical to protect. A worker traversing the middle of the roof has a false sense of security when working far from the roof edge. If workers are carrying equipment, or focused on the job at hand, it is easy to misstep and fall through an opening. Statistically, in the USA, more people fall through skylights than over the edge of the roof*, which is why Kee Safety evaluates all rooftop openings as a serious risk concern.



- COHS SOR/86-304: Section 12.10(1)
- ON OH&S R.R.O. 1990, Reg 851: Section 13; Section 85
- Alberta Regulation 87/2009: Section 139(1)

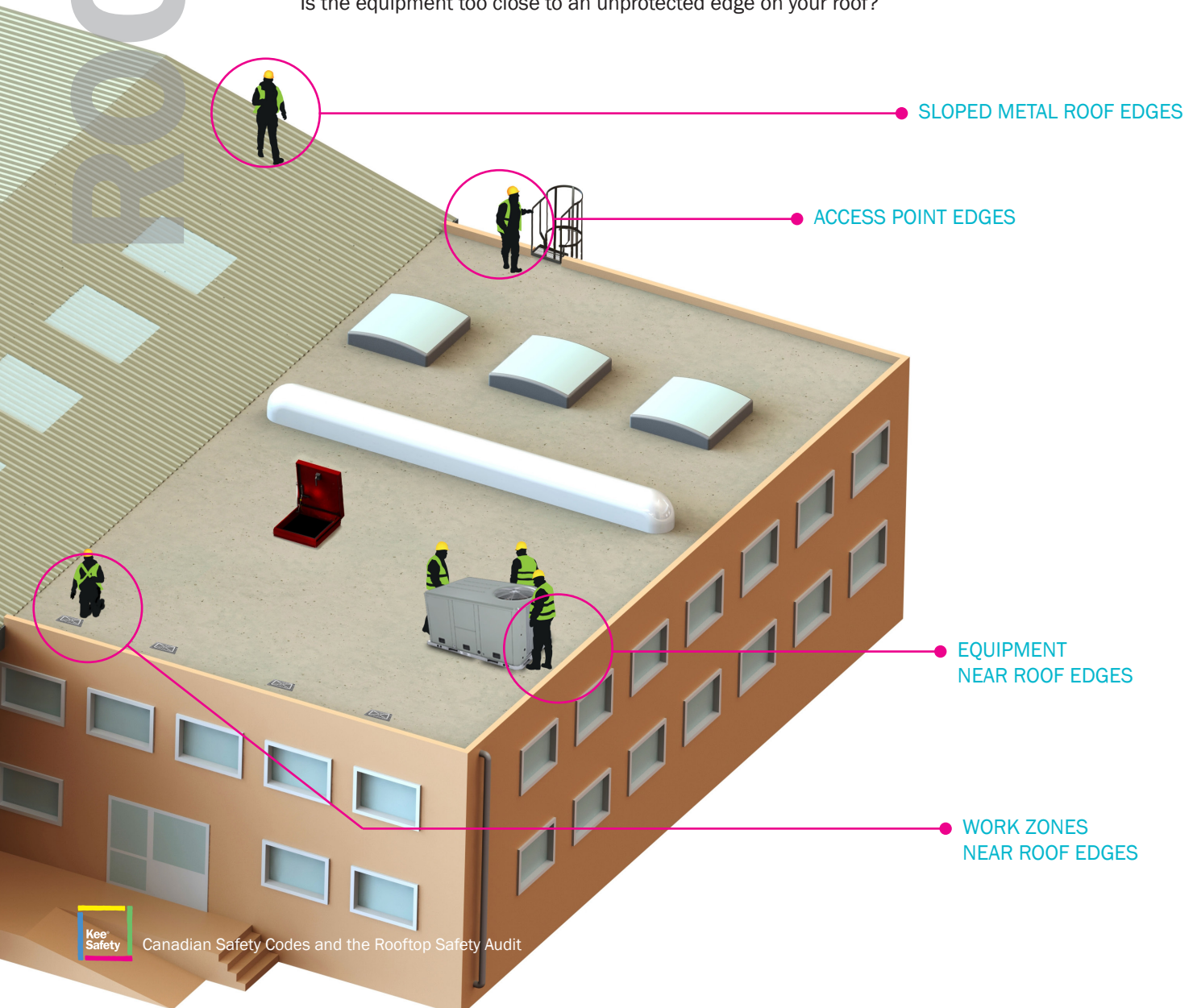
Identifying Danger Zones: Roof Edges

Protecting the Perimeter

When access to the entire roof is required, the safest, most comprehensive solution is a perimeter railing system that surrounds and protects all roof edges.

3 Unprotected Edges

The edge of the roof is the most visible hazard, and typically the hazard most people want to protect first. Proximity to the roof edge is a significant factor in identifying the probability of an accident occurring. **OH&S Code states that if a worker can be exposed to a fall, then they must be protected.** Frequently, a worker's purpose for accessing the roof is to service a piece of equipment. Is the equipment too close to an unprotected edge on your roof?



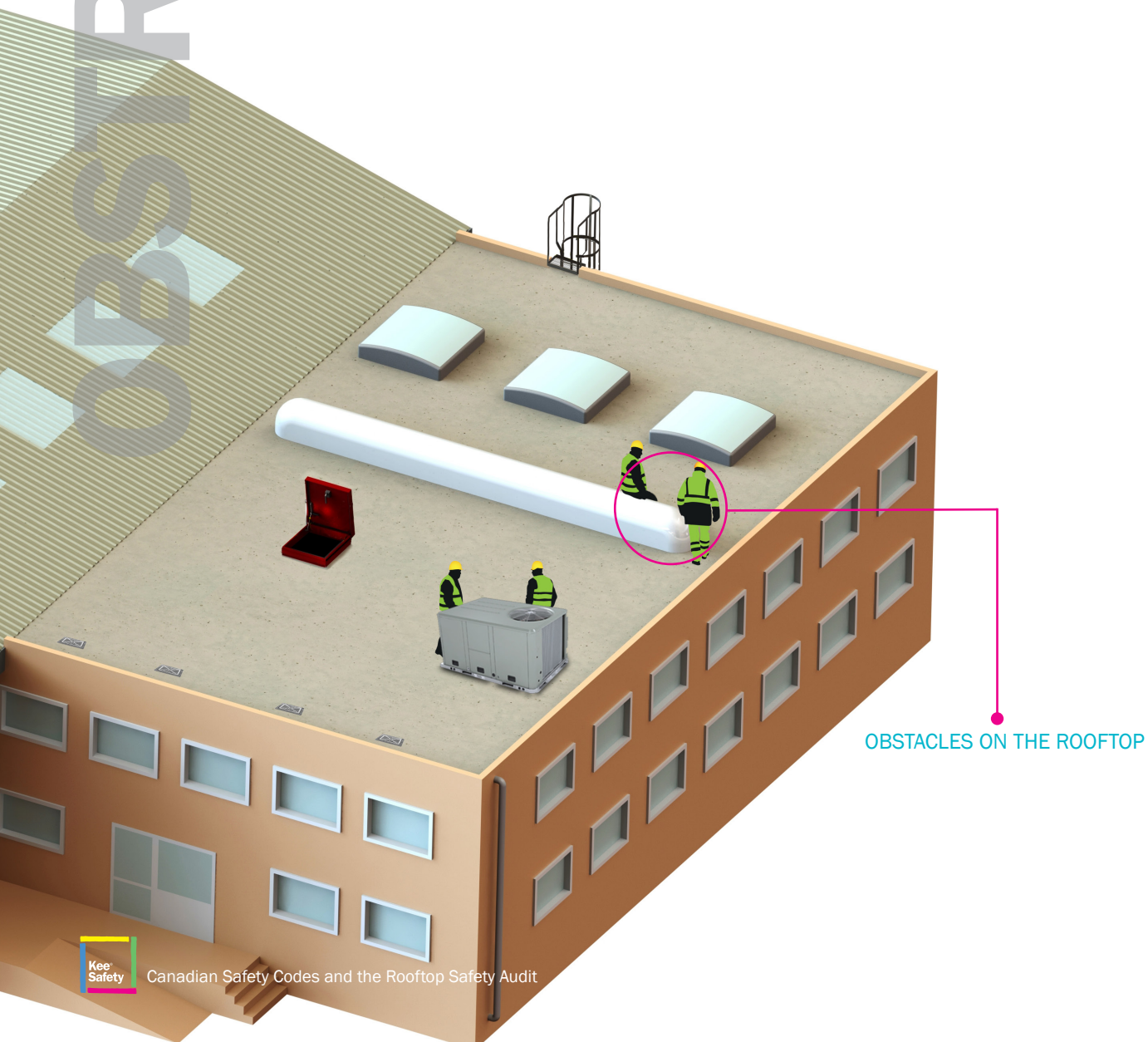
Identifying Danger Zones: Rooftop Obstructions

Obstacles on the Rooftop often Hinder Access to Work Zones

Rooftop safety includes providing a safe and efficient path across the rooftop to reach drains, HVAC units or other equipment that requires maintenance. Hazards include obstructed routes and changes in roof level where slips, trips and falls are likely.

4 Obstacles

Understanding the path your workers take across the roof is necessary for a complete fall protection assessment. Obstacles on the roof force workers to unsafely climb over or step around the obstruction, often placing workers at risk by walking too close to the roof edge.



OBSTACLES ON THE ROOFTOP

Using an Integrated Solution: A Complete Rooftop Fall Protection System



KeeGuard® Topfix

Non-penetrating guardrail for all metal roof types including standing seam and metal profile for safety at the highest level.

KeeGuard® Skylight Screen

Skylights are considered a hole in the roof - an OH&S safety hazard. The unique construction and mounting design allow the KeeGuard Skylight Screen to be attached without penetration, maintaining the integrity of the roof and the skylight.

Kee Hatch®

A safety access and railing system designed for secure egress/ingress through a dedicated roof hatch.

Kee Gate®

Provides permanent protection for any openings, ladder/stair access points, roof hatches and restricted areas, where access for roof maintenance is required.

Kee Dome®

A free-standing, modular solution deployed around skylights, roof lights and dome lights, allowing access to rooftops without the hazard of falling through glazed areas.

Safe Access Platform [SAP]

When obstacles exist on the rooftop (piping, ventilation systems, partitions between buildings or level changes) SAPs can be custom designed to provide safe access over those hazards.

KeeGuard®

On a flat roof, a protected perimeter limits access to the leading edge. Installing a modular, free-standing railing system that does not penetrate the roof membrane provides a safe barrier to the roof edge.

Kee Walk®

On a standing seam metal roof, or metal profile roof, a level walkway system provides a safe, anti-slip surface to avoid tripping over the seams, crowns and valleys.

Kee Walk® with Guardrail

Kee Walk with integrated Guardrail provides sturdy handrail support securely attached to non-slip treads for dependable foot traction and balance where roof surfaces are uneven or slippery.

Kee Anchor® Weightanka

A modular, dead-weight anchor fall prevention system, used with personal fall protection equipment, allows for safe freedom of movement around the roof space.

KeeLine® Horizontal Lifelines

Horizontal safety lines provide continuous protection when working at heights. Our 39-foot system accommodates up to 3 users and can be mounted either directly onto the roof surface or on to the building structure.





Keep Safety: Your Fall Protection Experts

Keep Safety is the leading expert and global manufacturer of safety and fall protection systems. We are fully committed to Separating People from Hazards.

Established in Canada in 1956, Kee Safety, Ltd. has a proud history of supplying fall protection systems that exceeds safety standards, providing world-class customer service, and leading the industry in new product development.

Benefits of a Rooftop Safety Audit with Kee Safety

- We provide you with a detailed action plan, prioritizing the areas deemed as “critical”
- Our experts create a customized solution that fits the exact needs of your facility
- Kee Safety fully documents your fall protection requirements for presentation to your peers, upper management, or budget approval board
 - Organizes your budget requests
 - Presents a coordinated plan to inspectors
- Only Kee Safety offers a solution-designed proposal using products that:
 - Will not puncture your roof, cause roof leaks, or void your roof warranty
 - Are third-party tested to meet all Provincial Standards and Territorial Codes
 - Are extremely long-lasting (20-30 year life expectancy)
 - Many products can be easily installed by your crew or local contractor



[Download a copy of the Rooftop Safety Audit!](#)

Hierarchy of Fall Protection

It’s About the Partnership: Depend on Kee Safety to Reduce Risk

You have a trusted partner in the field. Our experts walk the roof with you to assess the hazards, and discuss the best combination of products and systems to mitigate the risk of injury to your workers. Kee Safety, Ltd. uses the Hierarchy of Fall Protection to guide you in this process. Originated to support Canadian OH&S regulations, the goal is to expertly evaluate, provide a comprehensive plan, and install a rooftop solution to successfully and safely separate people from hazards.



Installation

You can rely on Kee Safety and our worldwide network of certified installers to ensure compliance with all major standards and regulatory requirements. Our dedicated technical service team can provide a turn-key solution including on-site analysis, professional installation, advise on project costs and manage deadlines.



Kee Klamp, Kee Lite, Kee Stainless, KeeGuard, Kee Dome, Kee Hatch, Kee Mark, Kee Access, Kwik Kit, Kee Anchor, Weightanka, Wireanka, KeeLine, Kee Walk and Kee Projects are all registered trademarks of Kee Safety Ltd. Beam Clamp, and Box Bolt are all registered trademarks of Access Technologies Ltd, a subsidiary of Kee Safety International Ltd. While every effort has been made to ensure the accuracy of the information contained in this brochure, Kee Safety, Inc cannot be held responsible for any errors or omissions. Kee Safety, Inc reserves the right to alter or withdraw products without prior notice. Kee Safety, Inc does not accept responsibility for any loss or damage arising from improper use of its products. Copyright 2019 Kee Safety, Inc. All Rights Reserved.



CONTACT



Please contact one of our qualified Fall Protection Experts and schedule a rooftop safety assessment today!



Canada

Kee Safety, Ltd.
40 North Rivermede Road, Units 6 - 7
Concord, Ontario L4K 2H3
Tel: (905) 669 1494
Fax: (905) 669 4347
Toll Free: (877) 505 5003

www.keesafety.ca