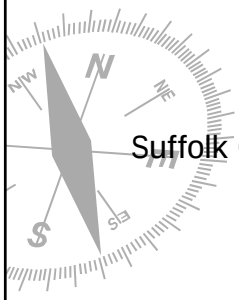
Life Safety Ropes and Systems

Questions and Answers



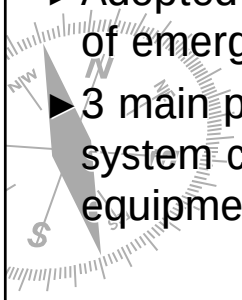
John M. Searing, PE
Deputy Commissioner
Suffolk County Fire, Rescue& Emergency Services

Background

- Requested by the Council in January to contact NYS DOL
- Did research on law and process
- Met with Matt Setteducati, Sr. Health and Safety Inspector of NYS DOL on April 5

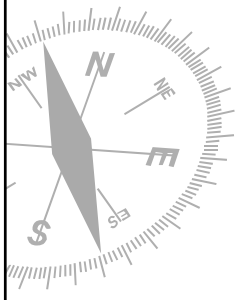
The LAW

- 12 NYCRR 800.7 – Emergency Escape and Self Rescue Ropes and System Components for Firefighters
- Adopted last December after several rounds of emergency rulemaking
- 3 main parts: specifications for ropes and system components; Risk assessment and equipment selection; and Training



Specifications / Definitions

Section 800.7(d)

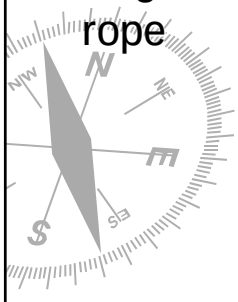


What is a Life Safety rope?

- Rope dedicated solely for the purpose of supporting people during rescue, firefighting, other emergency operations and during training.

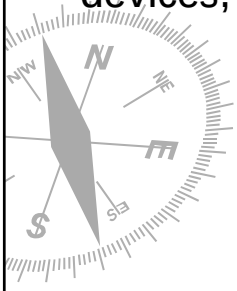
What is Escape rope?

- Rope that is classified as single purpose, single use, emergency escape (self-rescue) rope



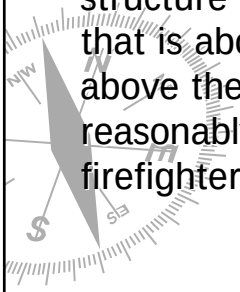
What are System Components?

- Life safety harnesses, belts, ascending devices, carabineers, decent control devices, rope grab devices, and snap links.



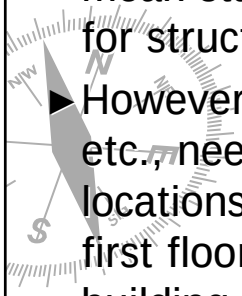
What is entrapment at elevation?

- Entrapment at elevation means a situation where a firefighter finds the normal route of exit is made unusable by fire, or other emergency situation, that requires the firefighter to immediately exit the structure from an opening not designed as an exit, that is above the ground floor and at an elevation above the surrounding terrain which would reasonably be expected to cause injury should the firefighter be required to exit.



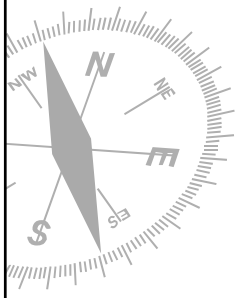
Some thoughts on this...

- This section says “injury” **not** “serious injury”
- “At elevation” is typically interpreted to mean starting at and including the 2nd story for structures that are on level grade.
- However, topography changes, drop-offs, etc., need to be considered. That is, locations where the basement becomes the first floor, etc, on another side of the building.



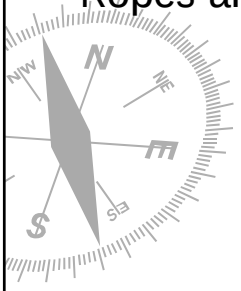
Specifications

Section 800.7(e)



What Standard Must Life Safety Rope and Systems Conform To ?

- Life safety ropes and systems must meet NFPA Standard 1983-2006 - Life Safety Ropes and Systems.

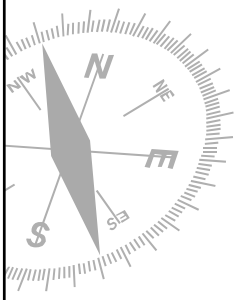


What if I'm using equipment that conforms to an earlier Edition of NFPA 1983?

- As long as the equipment is serviceable you may continue to use it. Any new purchases must meet NFPA 1983-2006.

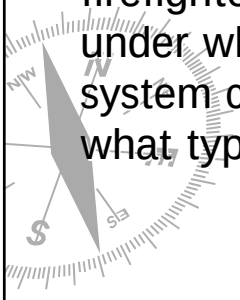
Risk Assessment / Equipment Selection

Section 800.7(f)



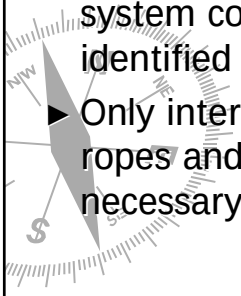
How do I know who needs what equipment?

- The Employer must perform a written risk assessment of the buildings where it's firefighters perform duties and determine under what circumstances escape ropes and system components will be required and what type will be required.



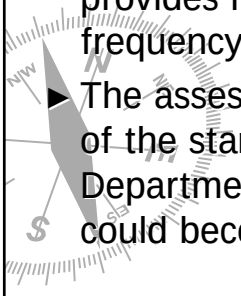
Who must I provide this equipment to?

- The employer is required to provide each firefighter with properly fitted life safety ropes and system components appropriate for the risk identified in the risk assessment.
- Only interior structural firefighters would need the ropes and system components as found to be necessary in the risk assessment.



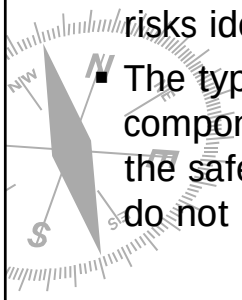
Risk Assessment

- A risk assessment shall include identification of the types and heights of structures in the areas where the Department provides fire protection and any other districts that the fire department provides mutual aid with “reasonably predictable frequency”.
- The assessment shall also include an examination of the standard operating procedures that the Department follows at fires where a Firefighter could become trapped at elevation.



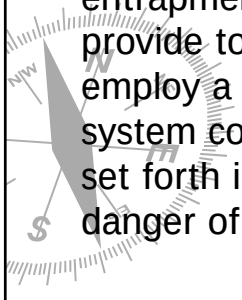
Risk Assessment

- Identification of the risk in question shall include:
  - The extent to which standard operating procedures already in place will mitigate the risks identified
  - The type of escape ropes and system components that will be necessary to protect the safety of firefighters if operating procedures do not mitigate the risk



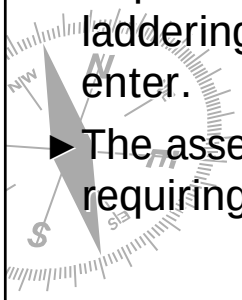
Risk Assessment

- Should the risk assessment establish that firefighters employed by the department performing interior structural firefighting are reasonably expected to be exposed to risk of entrapment at elevations, the employer shall provide to each interior structural firefighter in its employ a properly fitted escape rope and those system components which meet the specifications set forth in 800.7(e) and which would mitigate the danger of life and health associated with such risk.



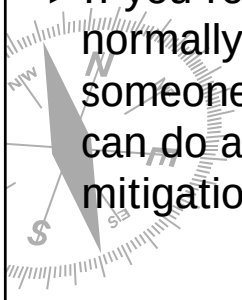
Risk Assessment

- An area that consists primarily of one and two story buildings with access to all sides may not present a great enough hazard to require ropes if SOPs call for immediate laddering of upper stories when firefighters enter.
- The assessment may reveal other factors requiring or not requiring systems.



Mutual Aid

- Fire Departments that have automatic mutual aid programs must follow each others risk assessments
- If you respond to a mutual aid that is not normally your response area and not in someone else's plan, Chief or ranking officer can do a spot assessment for risk and mitigation.



Equipment Selection

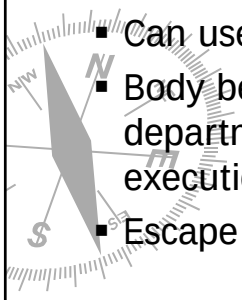
- Based upon the results of the hazard assessment select and provide equipment to each firefighter according to the risk.
- The selection decisions and factors evaluated must be communicated to each firefighter.

Equipment Selection

- Don't necessarily have to select a manufactured system
- Can put your own together as long as it meets 1983-2006
- Don't have to get one for everyone – can be assigned to the seats of apparatus

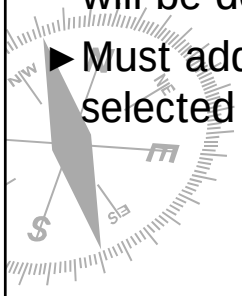
Equipment Selection

- If you have all residential 1 and 2 story, you can select necessary components for escape
  - For example - carabiners and light duty life safety rope; hook/carabiner and rope; etc
  - Can use body belay for 2nd floor
  - Body belay can be used for 3 stories if department can demonstrate training and execution
  - Escape belt can be used for solid structure



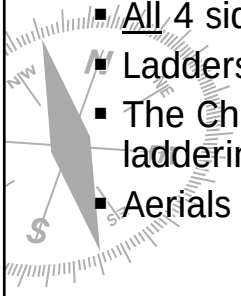
SOPs

- Must be written
- Must be current
- Must address how the worst case scenario will be dealt with
- Must address ladder placement, if that is selected mitigation



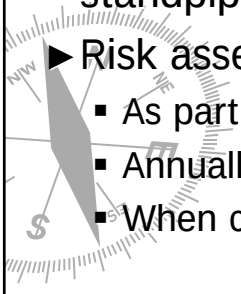
Laddering

- If you are going to provide for laddering of the upper floors:
  - It MUST be in your SOPs
  - Must ladder for all 4 sides
  - All 4 sides must be accessible
  - Ladders must be staffed
  - The Chief is responsible for ensuring the laddering
  - Aerials required for 3rd floor and above



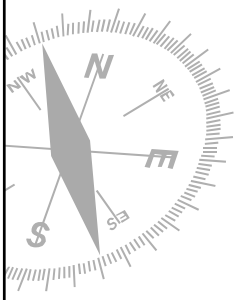
Risk Assessment

- The last word...
- Auxiliary Systems (sprinklers and standpipes) do not provide mitigative credit
- Risk assessments must be completed:
  - As part of an initial review;
  - Annually; &
  - When conditions change and warrant a review.



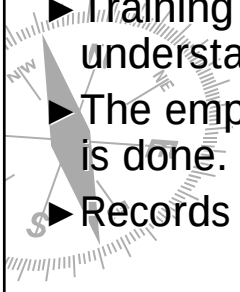
Training

Section 800.7(g)



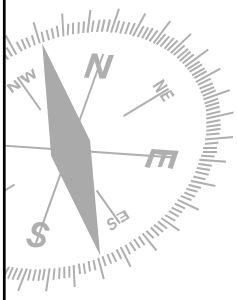
Training

- The employer must ensure that the firefighter is instructed and trained in the proper use of the selected life safety ropes and system components.
- Training must be comprehensive, understandable and **<u>recur annually</u>**.
- The employer must certify that the training is done.
- Records must be kept.



Employer Duties

Section 800.7(h)



Inspection of Ropes and System Components

- The Employer must develop a written inspection schedule for ropes and system components.
- The Employer must ensure that any defects found are immediately corrected or immediate action must be taken to eliminate use of the equipment.
- Inspections must be at least monthly and documented.

Inspection

- Any ropes or system components with repairable defects must be tagged as unsafe and stored in a manner that will not permit its use until repairs are complete.
- That is, put it under lock and key or some one will try to use it.

Unserviceable equipment

- Any life safety ropes and system components which are removed from service as unserviceable and are no longer fit for use as a life safety rope must be destroyed.

Questions?