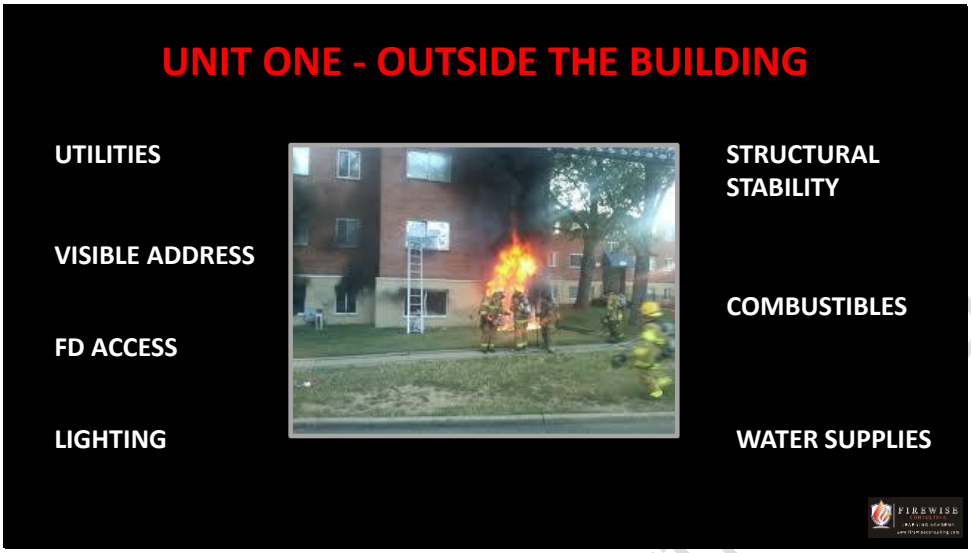


Many fires start on the outside of buildings and spread to the building. This is why the fire safety self-assessment should start outside.

In this Unit we will discuss the importance of addresses, storage of combustibles around the outside of buildings, fire department access to the building, water supplies for firefighting, exterior lighting, utilities, structural stability and building openings.

Is the address clearly visible so responders can locate it quickly?
The address should be posted on a sign with a minimum of 4 inch letters and be visible when traveling in any direction.
It should also be reflective so it can be seen easily in the dark.
The address should be mounted high enough to avoid snow in the winter or weeds during the summer.
The address should not be obscured by bushes, flowers or branches.
Many jurisdictions have a Street Address Bylaw which requires the address to be conspicuously located near the front entrance to the building. The bylaw may also require a duplicate address be posted near the street if the building address is concealed or not clearly visible from the street.
If someone is available during an emergency they should go to the street to meet the first responders.
Do not assume you will be able to convey your location to responders in an emergency, as you may not be able to speak.

Clutter and combustible debris in and around buildings must be kept to a minimum. Many injuries and fires result from poor housekeeping, improper storage of materials, and general clutter.
It is a good fire safety practice to properly store unused materials and dispose of rubbish.
Vandalism is the leading cause of arson fires and often is a crime of opportunity.

Where is the garbage kept? Is there a better place to keep this dumpster? In this case it was located under the second floor of the building. The Fire Code requires that outdoor storage receptacles such as dumpsters be located so that they do not create an undue fire hazard to surrounding buildings.

Garbage containers, especially plastic, should be kept in a secure location outside the building.

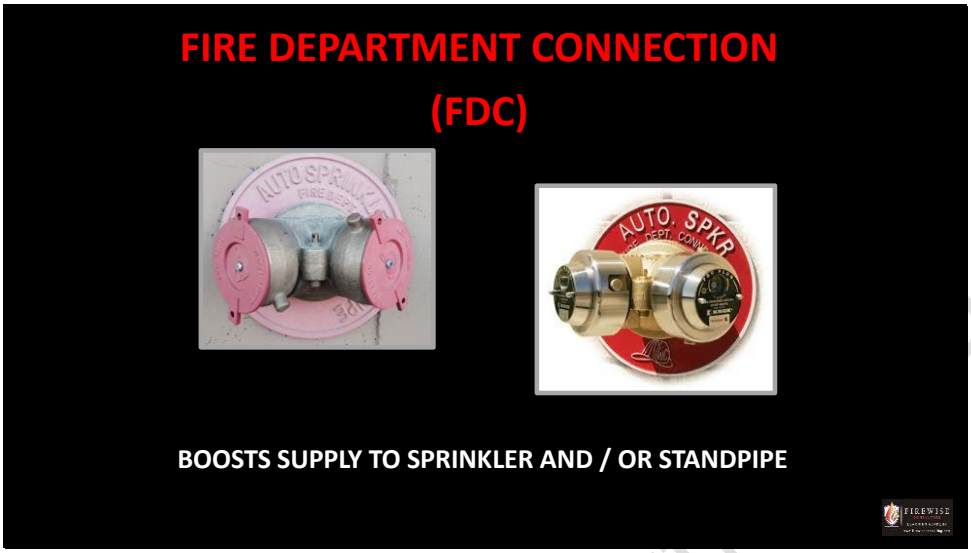
This short video clip shows a test fire that compares a plastic container on the left to a metal bin on the right. The plastic bin released 5 times more heat energy and 8 times more smoke than the metal bin. Imagine the damage that could result if these bins were located in contact with the building.

To provide effective service fire departments must be able to gain reasonable access to all buildings. Fire department access can be by way of roadways, fire lanes, parking lots or a combination thereof. Streets that provide access must be maintained and ready for use at all times. No parking signs must be posted.

Modern fire apparatus is large and needs room to maneuver. An important part of the outside the building fire safety self-assessment is to see if any changes have taken place since the last fire safety assessment. Are fire access roads and lanes identified with adequate signs? New gates, fences or overhead obstructions can create access problems for the fire department. Has there been any changes to vehicle parking that could affect access?

When a dead-end access route exceeds 150 feet or 45 Meters in length, an approved turnaround area should be provided. Access must always be available for use by fire trucks and must be at least 20 feet or 6 meters wide.

Ready access to a water supply is crucial for effective firefighting. The Fire hydrants closest to the building should be visible, not blocked or overgrown by vegetation in the summer or snow in the winter and be readily available for use by the fire department. Parking in front of a fire hydrant is never allowed.
Check to see if all the outlet caps are in place and the outlets unobstructed. A three-foot area around the hydrant should be kept clear at all times. This may be done by public works or it may be the responsibility of the owner if it is a private fire hydrant. Hydrants must be serviced regularly to ensure they operate properly including hydrants on private property.



If the building has an automatic sprinkler system or a standpipe and hose system there should be a Fire Department Connection or FDC, on the outside of the building. When a fire occurs, water is discharged from the sprinkler heads to suppress and extinguish the fire. The fire department connection is used by the fire department to supplement the water supply to the sprinkler or standpipe and hose system.

The Fire Department Connection should be protected with proper fitting caps. Caps are used to keep dirt, dust, and debris out and prevent foreign objects from entering the fire suppression water supply system.

Buildings equipped with an automatic sprinkler system must have a fire department connection on the outside of the building easily accessible by the fire department.
Fire Department Connections should have proper signs that clearly identify them for the fire department to access in the event of a fire.

The fire department connection should be located on the street side of the building and be fully visible and kept unobstructed at all times to ensure immediate access. It should be located so the fire engine and its hose lines do not obstruct access to the building for other apparatus when connected to the FDC.

What's wrong with these pictures?
The connection on the left is broken to the point that the fire department would not be able to connect to it.
The vegetation on the right will quickly grow and obscure the connection from sight. Fire safety self-assessments must anticipate changes in vegetation or other conditions such as snow accumulation which will be dependent on the time of year the self-assessment is done. Landscaping changes over time and vegetation can grow to obscure the connection from view or obstruct access to the connection.

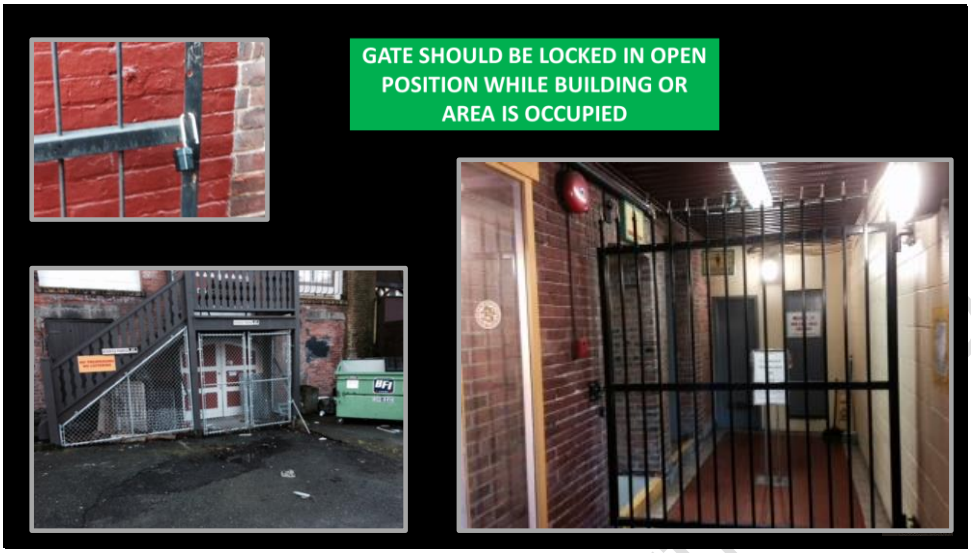
Many Fire Departments rely on a security key lock box system to enter property quickly and safely during an emergency response. The property owner purchases the Lock Box and mounts it near the main building entrance. Lock boxes should never contain keys other than for the main lobby entrance, common areas, roof access, stairwells, firefighters' elevator, or other 'public' areas in the building.

The main reason to use these devices is for rapid, secure access to be provided to the Fire Department; a secondary benefit is that the Fire Department does not damage the property by forcing doors or windows in an emergency.
In many case the lock box pays for itself the first time it is used.
They provide immediate emergency entry in case of fire, medical, or other type of emergency.
They prevent costly forced entry damage to doors or windows.
Undamaged doors can be re-secured after the emergency without the response of a building manager or private security personnel.
It allows faster Fire Department entry which reduces the potential damages because of a fire.
It allows first responders to enter if a building occupant is unable to open the door.
It ensures the security of the building.

All external exits and stairs should be equipped with adequate lighting for safe and quick evacuation of the building. The lights should be illuminated when the building is occupied.

Exterior light also provides an additional security measure. They are not part of the emergency lighting package however so they do not need to be connected to an emergency power supply.

Is there enough light for people to safely navigate around walkways and parking areas at night?

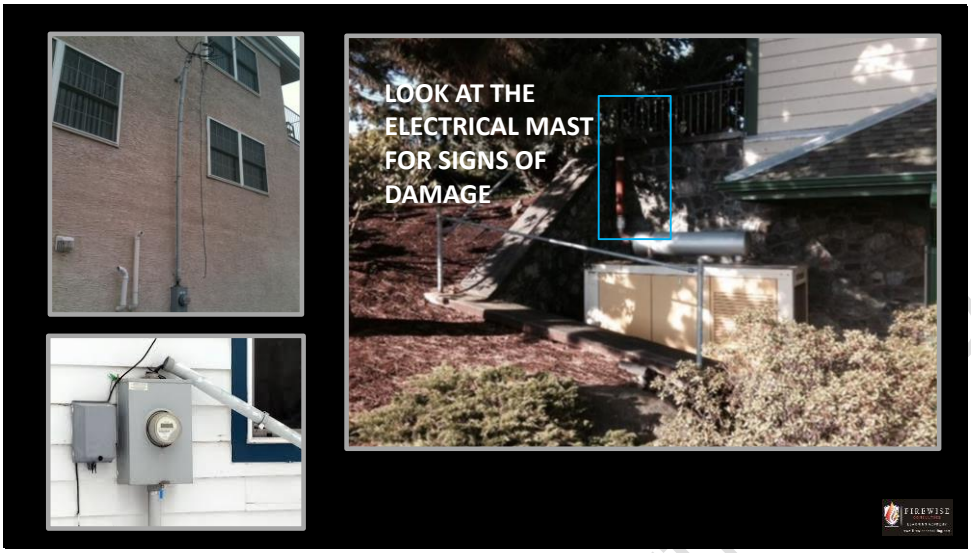


Exit routes should have an unobstructed path to a place of safety. If there are gates used to provide security they should be locked in the open position when the building or area is occupied. If a gate or fence obstructs the exit it must be treated as part of the exit and must open freely outward in the direction of exit travel without the use of keys or special devices.

A proper fire safety self-assessment will include a walk all the way around the outside of the building looking for fire and life safety issues. Look for all types of hazards such as potential trip and fall hazards that could affect exiting. Depending on when the fire safety self-assessment is done, will vegetation change and become a problem so that a fire starting on the outside of the building would easily transition into the building?

Identify the location of the utility connections such as gas and electric meters. Most jurisdictions require tamper seals on both gas and electric meters to ensure that they have not been tampered with. They are made of nylon monofilament line at least 0.644 mm or a metal 14 gage wire. Check to make sure that tamper seals are in place and not broken.

There must be adequate collision protection for utility connections. Metering and regulating equipment must be protected from potential physical damage. Where there is potential for vehicular damage including forklifts and other moveable equipment, a vehicle barrier or fencing should be provided.
The meter area must be in a location that is free from falling ice or snow hazards. Snow must not be piled directly in front of or on the meter set.
You may wish to make note of the location of the shut off devices so they can easily be located in an emergency and are not damaged or obstructed preventing the utility from being shut off.



Look at the electrical mast for signs of damage. In the picture on the left why is the wire hanging down? It is better to identify and fix the problem now rather than waiting for an emergency.

Many buildings are equipped with emergency power generators. Often these are located on the outside of the building. In this case the exhaust outlet is to close the tree branch. The branch should be cut back so as not to present a hazard.

Visually access the structural stability of fire escapes, decks, railings, stairs and hand rails. Fire escapes are no longer allowed for new construction but they provided an alternate means of egress for older buildings. In many cases fire escapes are very old and have not been inspected for many years. Wooden structures should be checked for rot while metal fire escapes should not show visible signs of rust and should be painted. Making sure the fire escapes are safe and in good repair is a good safety practice because you never know when you, your occupants or the fire department may need to use them in an emergency.

Look at the vent outlets on the exterior of the building to make sure they are in good repair. They should be equipped with a cover to prevent foreign material from entering and blocking the vent. Check to see if there is any buildup of combustible products such as lint from clothes dryers. If lint is visible at the outlets it can be assumed that the vent needs cleaning. A clogged vent can result in a dryer fire or dryer and vent fire which could be devastating.

In this unit we discussed the need to inspect the outside of the building looking to make sure:

- the address is clearly posted
- combustibles are properly stored or disposed of and garbage and recycling containers are not a potential hazard to the building
- hydrants are clearly visible and unobstructed
- fire department access is maintained and not obstructed
- if so equipped lockboxes are in proper working order with the right keys
- adequate lighting is provided on the exterior of the building to aid in building evacuation in emergencies
- utility connections are secure and protected
- ventilation outlets are equipped with proper covers
- And fire escapes, decks, railings and stairs are structurally stable

That's the end of Unit 1 which dealt with outside the building. You are now ready to move on to Unit Two which deals with Exiting but first there is a Unit Quiz. At the end of each unit we provide a Unit Review and a Unit Quiz. We hope this will help you learn the material and identify areas you may not be certain of. It is also designed to help you prepare for the exam at the end of the course. If you have any questions now is a good time to contact your local fire department fire prevention division.