

- When a fire is on a lower floor of a standpipe equipped building consider not using the standpipe and stretching hose directly from apparatus. Building features that are ideal for a direct stretch include a well opening in a stairwell that permit one 50 ft. section of hose to reach as high as the fifth floor, windows that can be opened are located in stairwells or at the ends of center-hallway multiple dwellings, and residential buildings with exterior hallways; these features allow firefighters to toss a rope bag to the ground and hoist a hose line.
- DO NOT stretch from a hose rack or cabinet on the fire floor because they do not lead you back to the refuge of a stairwell. There's one exception to this rule; that is when a fire occurs in a health care facility and smoke barrier doors are limiting the spread of smoke. In this case, the benefit of limiting the spread of smoke by stretching from a cabinet in the fire area is worth the risk because it will endanger less patients.
- Dry standpipes can be problematic because there may be an open outlet valve or broken pipe somewhere in the system. If possible have personnel check for open valves and thoroughly flush the outlet before connecting hose to flush debris and purge the piping of air.
- Outlets of wet standpipe systems should thoroughly flushed before connecting hose as well.
- Buildings not exceeding 75 ft. may be equipped with a manual wet standpipe system which is filled with water at a pressure that may be sufficient to supply residential sprinklers but not for hose lines. Similar to dry standpipes, supplying FDCs is a NECESSITY, not a precaution.
- Conversely, supplying FDCs to wet standpipe system pressurized by a building's fire pumps is a precaution in the event of fire pump failure. Say, a 55 story building has a demand pressure of 400 PSI; engine companies should connect to FDCs, allow the building's fire pumps to develop the proper pressure and be prepared to supply FDCs at 400 PSI in the event that the building's fire pumps fail.
- Supply FDCs with 2 three in. or 2 ½ in. hose lines. You can connect and charge one line, then connect a second line but you MUST remove both male "plugs" before charging the first line because if the clapper in the FDC head is faulty or missing pressure will build behind the plug, making difficult and dangerous to remove.
- Before connecting hose lines to an FDC, use a spanner wrench, NOT your hands to check for and remove any debris. Further, use the spanner to push open the clapper to check for debris behind it.
- When connecting 2 hose lines to an FDC with 3 or more inlets, don't connect to two inlets right next to each other; give yourself room to use spanner wrenches.
- If you encounter "frozen" female connections that will not turn, improvise swivels by using double male and double female adaptors. An alternative method is to twist the hose counter-clockwise several times and then untwist it clockwise as the coupling screws into the frozen female swivel.
- If you encounter a damaged FDCs, supply the standpipe system with hose lines connected to first floor outlets using double female adaptors.
- An EXCEPTION to the preceding tip is when first floor outlets are pressure reducing valves (PRVs). PRVs act as a check valve when pressurized on their discharge side. In this case connect hose lines to the fire pump's test connection. You must locate the fire pump room and open the valve for the test connection.

- The most reliable way to identify a PRV is to look inside the outlet to examine its valve stem. Valve stems in PRVs have NO THREADS, because they “float” in order to control pressure and flow.
- Systems with PRVs must be supplied at a specified demand pressure, which should be determined from pre-fire planning and posted at FDCs.
- PRVs control static pressure and when flowing, keeping it from exceeding 175 psi, as required by NFPA 14. Pressure restricting devices, (PRDs) control outlet pressure by restricting flow; they have no effect on static pressure. Most PRDs can be removed or circumvented by firefighters.
- Reasons why firefighters should be equipped to stretch at least 200 ft. of hose:
 - 1) Stairwells in modern, fully sprinklered buildings can be as much as 400 ft. apart.
 - 2) Firefighters may not be able to use the standpipe outlet closest to the fire because it is located in a stairwell with a smoke tower, which can create an area of low pressure, relative to the fire floor, possibly positioning fire fighters in the flow path of fire drawn towards the stairwell.
 - 3) Older buildings may not have standpipe outlets in the stair wells, rather, they are located in hallway hose cabinets that may not be close to stairwells.
 - 4) Buildings under construction may be required by code to have only one functioning standpipe, necessitating a longer stretch.
 - 5) Office suites in commercial high rise buildings are laid out differently on every floor, to meet the needs of each tenant. Consequently, firefighters cannot orient themselves with the floor below the fire to determine the closest, most direct path to the fire.
 - 6) Modern high rise buildings may have standpipe outlets at half landings; connecting one half landing below the fire floor may not allow the firefighter operating the outlet valve and reading the in-line gauge sufficient visibility. This would necessitate connecting to an outlet 1 ½ floors below the fire.
- When the fire floor hallway is filled with smoke, you can use the following method to determine the amount of hose necessary to reach and penetrate the fire area in residential buildings where the layout of apartments or hotel rooms is identical on each floor and the building has return stairwells:
 - 1) Locate the apartment directly below the fire; for example, if there is a reliable report of a fire in apartment 1106, locate apartment 1006.
 - 2) Locate the closest stairwell to apartment 1006, keeping in mind that the closest stairwell may be a smoke tower.
 - 3) Stretch hose from the attack stairwell to apartment 1006 and connect an additional 100 ft. This method will provide sufficient hose to advance from the floor below the fire to the fire floor on return stairs with one half landing, reach the door to the fire apartment and allow 50 ft. of hose to reach every area of an average size apartment.
 - 4) For larger apartments connect more than 100 ft.
 - 5) When a building has scissor stairs orient yourself 2 floors below the fire floor.
 - Do not enter potentially IDLH conditions with an uncharged hose line. If the fire floor hallway is “clean”, relatively clear of smoke, control the fire apartment door and do not open it until the line is charged and the line flowed to determine the proper pressure and the quality of the stream. If the fire floor hallway is “dirty”, contaminated with smoke, charge and flow the hose line before leaving the refuge of the attack stairwell.

- A static pressure on an in-line gauge is meaningless. Read the in-line gauge and judge the quality of your stream with the nozzle fully opened and flowing.
- “Team up” as many engine companies as necessary to get the first attack hose line in operation.
- Engine company officers must determine the length of hose necessary to reach the fire and the amount of personnel and their position on the hose line in order to maneuver it around friction points and changes of direction.
- Use caution when charging a second hose line from a standpipe because you can “steal” water from the first hose line in operation. Charge the second hose line while the first line is flowing in order read and maintain the proper pressure to the first hose line. Additionally, NFPA 14 requires that standpipe outlets flow a minimum of 250 GPM, therefore connecting and flowing two hose lines to one outlet using a wye may not provide sufficient flow for two lines.
- Conditions and building features where hose smaller than 2 ½ in. hose may be used for standpipe operations:
 - 1) Fires in fire resistive residential buildings where compartmentation provided by fire-rated construction limits the potential volume of fire to within the suppression capability of a hose line flowing less than 250 GPM.
 - 2) Fires in fully sprinklered buildings where the sprinklers are definitely having an effect on the fire; for example the fire floor hallway is filled with cool white “steamy” smoke.
- Conditions and building features where using hose smaller than 2 ½ in. may not control a fire and endanger personnel :
 - 1) Fires in large, open areas such as office suits in commercial high rise buildings with center core construction.
 - 2) Fires requiring long stretches, such as when the closest stairwell cannot be used as the attack stairway or in buildings under construction where there is only one functioning standpipe.
 - 3) Low standpipe pressure issues common in pre-1993 buildings and systems with improperly installed, adjusted or maintained PRVs.
 - 4) Any time fire is showing from the building’s exterior.

*Become proficient in extending a hose line at the nozzle and at the standpipe outlet and know the indications of where to extend it.