



These Scenarios are only Typical. Applications not falling into one of these need to be reviewed and approved by Public Works & Utilities Dept. (PW&U) and Wichita Fire Dept. (WFD). If there is no domestic service tap then the 200' limit of fire service applies to the connection at the public main. The 6 FH limit referenced in this document is assuming an 8" main. If there is a need for additional FH's it is to be addressed by upsizing and modeling information which must be provided to the City to support the request, for their approval. The FDC must be on the exterior of the building within 150' of a FH, visible from the City street and with a backflow preventer in the building.

**SCENARIO 1**  
 Primarily for additional fire hydrants (FH) in the public right-of-way as required by the WFD when no other additional fire protection is needed.  
 1a shows the same but where the main is on the same side.

**SCENARIO 2**  
 Primarily for existing buildings, buildings with 1" or 2" domestic service, and buildings not requiring additional FH's. There is an existing FH within 150' of the fire department connection (FDC). Fire line can be no longer than 200' from domestic water tap to the double detector check (in building). Fire line can be 4" thru 8".

**SCENARIO 3**  
 Primarily for buildings that cannot be adequately served with a FH in the public right-of-way, requiring a 1" or 2" domestic service, and do not need a building fire sprinkler system. The private FH must be visible from the City Street and within 200' of the domestic water tap.

**SCENARIO 4**  
 Primarily for buildings requiring FH's which are not visible from the City street or with extensions in excess of 200' from domestic water tap an approved backflow preventer in a service vault is required. Fire protection system shall be looped with two independent points of supply from public mains when supplying more than 6 FH's or when deemed necessary, by PW&U or WFD.

**SCENARIO 5**  
 Primarily for commercial applications requiring an additional public FH within 150' of the FDC, a building fire sprinkler system, and a 1" or 2" domestic service. The FDC must be on the exterior of the building and visible from the City street. 5a shows scenario if the main is on the short side.

**SCENARIO 6**  
 Primarily for commercial applications requiring an additional public FH, a building fire sprinkler system, and a 3" or larger domestic meter. Additional services, such as lawn irrigation, can also be served from this type of project as long as the tap is in the right of way on the main side of the City fire service valve.

**SCENARIO 7**  
 Primarily for buildings requiring private FH's and a building fire sprinkler system. There shall be a valve that isolates the FH from the fire service & domestic service. The point of service shall be valved such that private lines with FH's can be shut off independently of the private lines with building sprinkler systems. The private FH must be visible from the City street and within 200' of the domestic water tap.  
 7a shows scenario if the main on the short side. The total amount of pipe (sprinkler and hydrant line) from the domestic service is not to exceed 200'. This is the preferred option over scenario 8.

**SCENARIO 8**  
 Primarily for buildings requiring private FH's and a building fire sprinkler system. The point of service shall be valved such that private lines with FH's can be shut off independently of the private lines with building sprinkler systems. The private FH must be visible from the City street and within 200' of the domestic water tap.

**SCENARIO 9**  
 Primarily for buildings requiring private FH's not visible from the street and a building fire sprinkler system therefore requiring an approved backflow preventer in a service vault. Fire protection systems shall have isolation valves at appropriate locations to allow for sectionalizing the system in the event of necessary repairs or extensions. Fire protection systems shall be looped with two independent points of supply from public mains when supplying more than 6 FH's or when deemed necessary by PW&U or WFD.

**SCENARIO 10**  
 Primarily for multiple buildings under separate ownership with parcels not having access to existing water. It provides for a public water main with FH's in an easement through the property. For this scenario there are maintenance access requirements such as the water main must be in or near a drivable surface and it must have unobstructed access at all times. There must be unpaired areas such as parking islands in which to place meters and FH's. When the lot and its layout allow, the system shall be looped or designed such that it may be looped with future development. Fire protection systems shall have isolation valves at appropriate locations to allow for sectionalizing in the event of necessary repairs or extensions. Public water mains shall be looped with two independent points of connection to other public mains when supplying more than 6 FH's or when deemed necessary by PW&U or WFD.

**SCENARIO 11**  
 Primarily for multiple buildings under common ownership especially for those without 24 hour unobstructed access. The Fire line Assembly Meter is commonly referred to as an 8x2 compound meter, the property owner is responsible for any repairs beyond the master meter. The owner will also be required to provide backflow prevention for the fire services at the individual buildings if sprinkled. The property owner shall be billed for any and all water which flows through the master meter. Fire protection systems shall have isolation valves at appropriate locations to allow for sectionalizing in the event of necessary repairs or extensions. Fire protection systems shall be looped with two independent points of supply from public mains when supplying 6 or more FH's or when deemed necessary by PW&U or WFD.

**SCENARIO 12**  
 Primarily for large commercial developments that require FH protection on both sides of the buildings(s). Same as scenario 10 except with back side coverage which shall be private, with maintenance agreements as necessary. Domestic services shall only be tapped off of the public line.

All of these typical scenarios should be installed by the City's private project procedure. Any scenario with FH or water line in right-of-way or easement have the potential of being designed, bid, and constructed by City contract. This can be reviewed by PW&U Engineering staff if there are further financing questions. All facilities on private property shall be installed/connected by a licensed fire protection contractor approved by WFD. Any work in utility easement shall be by one or the other of these approved contractors.