

**From:** Ruckriegel, Edwin  
**Sent:** Thursday, January 5, 2017 1:31 PM  
**To:** Davis, Steven; Zellers, Ledell  
**Cc:** Sullivan, William  
**Subject:** RE: Fire protection of buildings

Alder Zeller:

Thanks for reaching out for an explanation from the MFD. The following variables impact the spacing location and height of trees between the aerial apparatus access and buildings.

- **Building Height:** Buildings more than 30 feet in height require aerial apparatus access. The fire code prohibits overhead obstructions between the access and the building.
- **Construction Materials –** Buildings with a structural core of steel and/or concrete are less likely to collapse under fire conditions. Buildings with wood structural supports can become unsafe for firefighting operations and can fail. The steel and/or concrete buildings allow the FD to be more flexible in the placement of street trees.
- **Type of Fire Sprinkler System:** Buildings without fire sprinkler protection do not have any built-in automatic life or property protection, thus aerial apparatus access is essential. Buildings with life-safety (NFPA 13R) sprinkler systems are installed to protect the people, not the structure. A fire involving the structure is possible, so aerial access is very important. Full fire sprinkler protection (NFPA 13) protects the people and the structure. Buildings with full fire sprinkler protection allow some flexibility with respect to the placement of street trees.
- **Occupancy and Use:** How the building will be used is a consideration for access. Buildings where people sleep have the greatest frequency of fire fatalities. Buildings where people gather in large numbers have the potential for multiple life loss events. Residential and assembly occupancies allow less flexibility when applying the fire codes.

Recognizing the interests of other city agencies and neighborhoods, the MFD reached a compromise to allow some street trees between the building and the aerial apparatus access lane. In consultation with Parks and Planning, street trees are planted based on the mature width of the canopy. For example, trees with a 30 ft. canopy are spaced to ensure a 30 ft. space between mature trees. This approach appears to meet the needs and interests of all involved.

If more street trees are a priority for a project, the aerial apparatus access could be provided on the property. When the access lanes are internal to the property, unlimited street trees can be planted along the street side(s) of buildings. However, internal access lanes require more land for driveways and impervious surfaces.

Cordially,  
Ed Ruckriegel  
Fire Marshal

**From:** Davis, Steven  
**Sent:** Thursday, January 05, 2017 7:56 AM  
**To:** Ruckriegel, Edwin  
**Subject:** FW: Fire protection of buildings

[Here is one for you to take care of.](#)  
sd

**From:** Zellers, Ledell

**Sent:** Wednesday, January 4, 2017 11:04 AM  
**To:** Davis, Steven  
**Subject:** Fire protection of buildings

Hello Steve,

At one point you or one of your staff noted that varying building quality and fire suppression methods have an impact on the height of trees that are acceptable and the distance apart trees can be planted. Could you please provide me with more detailed information about the kind of quality/fire suppression methods needed and associated legally required spacing and maximum height of trees? I may not be expressing the question well...but I think you will understand what I mean.

Thank you!  
Ledell

Alder Ledell Zellers  
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