# TECH BRIEFS





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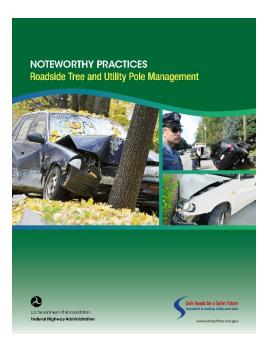
SCHOOL OF ENGINEERING

Tech Brief 2017-3

# **Recommended Placement of Urban Trees and Utility Poles**

Roadside trees often enhance the urban environment and roadside poles serve the community by providing support for essential public utilities and illumination. If your responsibilities include approving the location of these assets within your jurisdiction's public right-of-way, care should be taken with regard to roadway safety.

When deciding where to place trees and utility poles, a recent Federal Highway Administration publication may provide helpful guidance. *Noteworthy Practices:* Roadside Tree and Utility Pole Management presents a number of recommendations for improving safety while introducing trees and utility poles into the urban roadside environment.



# **Lateral Offset**

Utility poles and trees of mature diameters greater than 4 inches are recommended to be located at least 6 feet behind the curb of urban roadways. Lateral offset always needs to be greater than 4 feet behind the curb. See also the AASHTO Roadside Design Guide for additional guidance.

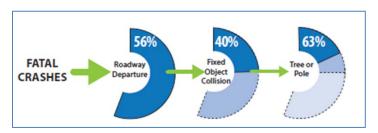
# Visibility

It is recommended that trees and utility poles be located so as not to restrict the drivers' sight. Some suggestions for improving sight distance and visibility include:

- Keeping intersection sight triangles clear of any visual obstructions between 3 feet and 10 feet vertically.
- Placing trees and poles outside of established sight distance parameters for horizontal curves on ramps.
- Locating trees and poles where their presence will not obstruct regulatory, warning, or advisory signing.

#### Weather

It is also advisable to place trees where their shadows will not interfere with the solar impact of snow and ice melting.



Relationship of roadside tree and utility pole crashes to all fatal crashes

Source: FHWA

## Maintenance

As plantings are considered, it is optimal to avoid tree species with the following characteristics:

- Their fruit, seed pods, brittle branches, or leaves would obstruct drainage facilities resulting in gutter spread into the travel lanes.
- Their fruit is edible and could attract humans or wildlife into the roadway, creating a safety hazard.

### **Worker Safety**

Trees and shrubs need to be planted in locations where their maintenance will not place workers in close proximity to live traffic.

If existing poles cannot be relocated, they should be shielded or designed to be breakaway. When considering tree placement, decisions should be based upon mature diameter of the species.

#### Reference:

Noteworthy Practices: Roadside Tree and Utility Management, FHWA-SA-16-043, US Department of Transportation, Federal Highway Administration, September 2016. http://safety.fhwa.dot.gov/roadway\_dept/clear\_zones/fhwasa16043/fhwasa16043.pdf

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