



Trees Compatible with Utility Lines

Selecting the proper tree to plant is critical to the long-term health and aesthetic beauty of the roadside landscape. This is especially true when planting trees near overhead utility lines. It is important to plant trees that are compatible with overhead lines to avoid conflicts such as tree-caused outages and safety hazards. Planting the right tree in the right place near utility lines also reduces the need for future pruning.

The International Society of Arboriculture provides guidelines for planting trees near utility lines in their brochure, *Avoiding Tree and Utility Conflicts*. There are two primary considerations when selecting trees to plant near power lines – the trees mature height and its location near the wires. The brochure states that trees planted beneath and 15 feet to either side of utility lines should be low growing trees that mature to no more than 20-25 feet in height. Medium-sized trees – those growing no more than 40-45 feet in height - should be planted at least 15 feet from the lines and tall growing trees maturing over 45 feet in height should be set back at least 30 feet from the lines. Upright fastigate trees may be planted closer to the power lines than other tall growing trees due to their narrow crown. Upright fastigate varieties of trees such as English Oak and European Hornbeam may be planted within 20-25' of power lines. Select hardy trees suitable to your local climate and resistant to insects and disease as described in the Penn State University publication, *Street Tree Factsheets*. Plant a diverse variety of tree species to maintain a healthy tree population less likely to be impacted by insect or disease outbreaks.

When designing a landscape, you may also wish to consider including low growing deciduous shrubs in your plan such as bayberry, dogwood, filbert, flowering quince, forsythia, hydrangea, lilac, mock orange, ninebark, privet, rose-of-sharon, smokebush, spiraea, viburnum, weigela and winterberry. To maintain year-round foliar interest, also consider low growing evergreen shrubs such as andromeda, azalea, boxwood, holly, juniper, leucothoe, mountain laurel, rhododendron and yew.

Remember – “Plant the Right Tree in the Right Place” and Call Before You Dig (1-800-922-4455) at least two full working days in advance to locate buried utility pipes and cables.

Below is a partial list of low growing and medium sized trees which are compatible with utility lines, requiring little or no pruning to maintain a safe clearance. Included also is a list of hardy narrow crowned fastigate trees, tall growing broadleaf trees and tall growing conifer trees that show good tolerance to urban conditions.

Low Growing Trees (Maturing up to 25')

Suitable for planting within 15 feet of power lines (depending on height of conductors and geographical terrain).

Common Name	Latin Name	Features/Cultivars
American Witchhazel 20'	<i>Hamamelis virginiana</i>	Yellow flowers in Oct - Nov and yellow fall foliage
Carolina Silverbell 25'	<i>Halesia tetraptera</i>	Showy, white bell-shaped flowers
Chinese Stewartia 15-25'	<i>Stewartia sinensis</i>	White flowers and sandstone bark
Chinese Witchhazel 10-20'	<i>Hamamelis mollis.</i>	Yellow flowers in Feb - March and orange/yellow fall coloration.
Epaulette Tree 20'	<i>Pterostyrax corymbosum</i>	Clusters of fragrant white flowers
Flowering Crabapple 25'	<i>Malus spp.</i>	Select low growing varieties maturing 20–25 ft in height resistant to apple scab, fire blight and cedar apple rust; fruitless varieties available.
Fragrant Snowbell 20-30'	<i>Styrax obassia</i>	White, fragrant, bell shaped flowers and smooth gray bark
Franklinia Tree 10-20'	<i>Franklinia alatamaha</i>	White flowers and crimson fall foliage
Fringetree 15-25'	<i>Chionanthus spp.</i>	Hardy tree with fleecy, snow-like white flowers and blue grape-like fruit
Goldenchain Tree* 15-20'	<i>Waterer laburnum</i>	Yellow pendulous flowers
Hawthorne 15-25'	<i>Crataegus spp.</i>	White flowers, red fruit and tolerant of urban conditions; select thornless and disease resistant cultivars i.e. Thornless Cockspur 'Crusader' 15-20', Ohio Pioneer Dotted 20-25' and Crimson Cloud English 15-20'
Japanese Snowbell 20-30'	<i>Styrax japonicus</i>	White bell-shaped flowers
Japanese Tree Lilac 20–30'	<i>Syringa reticulata</i>	Hardy tree with clusters of creamy white flowers i.e. Ivory Silk 20-30', Summer Snow Cap 20-25' and Regent 25-30'
Kousa Dogwood 25'	<i>Cornus kousa</i>	Resistant to anthracnose and borers, white or pink flowers, unusual red fruit and exfoliating bark. Hybrids of <i>C. kousa</i> and <i>C. florida</i> are pest resistant i.e. 'Constellation' and 'Stellar Pink'
Magnolia 10-20'	<i>Magnolia spp.</i>	Star and many other low growing hybrids with showy flowers i.e. 'Ann' and 'Jane'
Maple 15–25'	<i>Acer spp.</i>	Amur 15-20' and Tatarian 15–25'

Low Growing Trees (Maturing up to 25') cont.

Common Name	Latin Name	Features/Cultivars
Purple Leaf Plum 15-25'	<i>Prunus cerasifera</i>	Attractive burgundy/purple foliage and pink flowers i.e. Newport, Thundercloud and Pissard; lifespan 20-30 years
Serviceberry 20-25'	<i>Amelanchier spp.</i>	Low growing varieties available i.e. Robin Hill 20-25' and Autumn Brilliance 20-25'
Seven-Son Flower 15-20'	<i>Heptacodium miconioides</i>	Creamy white fragrant flowers, showy red sepals and exfoliating bark
Siebold Viburnum* 15-20'	<i>Viburnum sieboldii</i>	Creamy white flowers and red/black fruit

Medium Growing Trees (Maturing up to 45')

Set back a minimum of 15-25' from power lines (depending upon species and geographical terrain).

Common Name	Latin Name	Features/Cultivars
American Hornbeam 20-30'	<i>Carpinus caroliniana</i>	Gray, smooth sinewy bark and yellow-red fall color
Amur Corktree* 35-45'	<i>Phellodendron amurense</i>	Rugged, corky bark and yellow fall foliage
Amur Maackia 20-30'	<i>Maackia amurensis</i>	White pea-like flowers and amber exfoliating bark
Arborvitae 40'	<i>Thuja occidentalis</i>	Narrow evergreen; can grow to 50' but slow growing and easily pruned. Favored by deer
Callery Pear 35-45'	<i>Pyrus calleryana</i>	Hardy tree with white flowers; Bradford and other cultivars are overplanted and prone to storm damage due to poor branch structure. Chanticleer 35-40', Aristocrat 35-45', Autumn Blaze 35-45' and Redspire 40-45' have better branch habit
Eastern Redbud 25-35'	<i>Cercis canadensis</i>	Beautiful rosy pink flowers; heart shaped leaves turn yellow in fall
Eastern Red Cedar 40'	<i>Juniperus virginiana</i>	Narrow evergreen; slow growing and easy to maintain.
Flowering Cherry 25-40'	<i>Prunus spp.</i>	Planted for their beautiful floral displays; generally short-lived tree; Sargent, Higan and Yoshino tend to be longer lasting than Kwanzan (Oriental Cherry)

Medium Growing Trees (Maturing up to 45') cont.

Common Name	Latin Name	Features/Cultivars
Goldenrain Tree* 25-40'	<i>Koelreuteria paniculata</i>	Rich yellow flower spikes and papery lantern like fruit; tolerant of urban conditions
Holly 40'	<i>Ilex opaca</i>	Pyramidal evergreen with dark green leaves and red fruit; many upright hybrids available
Imperial Honeylocust 30-40'	<i>Gleditsia triacanthos</i>	Thornless and usually fruitless; 'Imperial' is a lower maturing cultivar compared to the species
Japanese Stewartia 20-40'	<i>Stewartia pseudocamellia</i>	Showy white flowers, exfoliating bark and burgundy fall foliage
Magnolia 25-40'	<i>Magnolia spp.</i>	Showy flowers i.e. Saucer, Merrill, Galaxy and many other low growing hybrids
Maple 25-40'	<i>Acer spp.</i>	Paperbark 25-35', Hedge 25-40' and Trident 20-30'
Persian Perotia 20-40'	<i>Parrotia persica</i>	Yellow/orange/red fall color and exfoliating bark
Red Horsechestnut 30-45'	<i>Aesculus xcareia</i>	Showy rose-red flowers; less susceptible to leaf blotch and scorch; 'Briotii' has deeper red and longer lasting flowers
Serviceberry 20-30'	<i>Amelanchier spp.</i>	Hardy tree with white flowers and smooth gray bark; many low growing cultivars available i.e. Majestic, Princess and Diana
Sourwood 25-30'	<i>Oxydendrum arboreum</i>	Panicles of fragrant white flowers and yellow/red/purple fall foliage

Hardy Tall Growing Upright Narrow Crowned Trees

Set back a minimum of 20-25' from power lines (depending upon species and geographical terrain).

Common Name	Latin Name	Features/Cultivars
Fastigate English Oak	<i>Quercus robur 'Fastigiata'</i>	70' H, 15-20' W; Hardy narrow crowned tree
Fastigate European Hornbeam	<i>Carpinus betulus 'Fastigiata'</i>	40' H, 20-30' W; Sinewy bark and corrugated leaves
Fastigate Ginkgo	<i>Ginkgo biloba 'Fastigiata'</i>	60' H, 20-25' W; Attractive fan shaped leaves and tolerant of urban conditions
Upright Red Maple	<i>Acer rubrum</i>	50-60' H, 15-20' W; 'Armstrong' and 'Columnare'; Excellent fall coloration

Hardy Tall Growing Broadleaf Trees

Set back a minimum of 30-50' from power lines (depending upon species and geographical terrain).

Common Name	Latin Name	Features/Cultivars
Ginkgo 80'	<i>Ginkgo biloba</i>	Attractive fan shaped leaves, golden yellow fall foliage and tolerant of urban conditions
Hackberry 60'	<i>Celtis occidentalis</i>	Corky ridged bark, somewhat tolerant of urban conditions
Honeylocust 45-70'	<i>Gleditsia triacanthos</i>	Tolerant tree with yellow fall foliage; 'Shademaster' and 'Skyline' are thornless and nearly fruitless
Katsura 40-60'	<i>Cercidiphyllum japonicum</i>	Heart shaped leaves, apricot-orange fall foliage and slightly shaggy bark
Kentucky Coffeetree 60-75'	<i>Gymnocladus dioicus</i>	Tolerant tree; 'Expresso' and 'Stately Manor' are fruitless
Lacebark Elm 50-75'	<i>Ulmus parvifolia</i>	Hardy tree, insect and disease resistant and exfoliating bark
Littleleaf Linden 60-80'	<i>Tilia cordata</i>	Hardy tree with fragrant yellow flowers; 'Greenspire' and 'Chancellor' are improved cultivars
London Plane 70-100'	<i>Platanus x acerifolia</i>	Tolerates urban conditions and attractive exfoliating bark; 'Bloodgood' is resistant to anthracnose
Oaks 55-80'	<i>Quercus spp.</i>	Generally considered to be hardy trees with strong wood and good branch structure; Many hardy species – White, Pin, English, Swamp White and Red
Pagoda Tree 50-70'	<i>Sophora japonica</i>	Tolerant tree with fragrant cream-colored flowers i.e. 'Regent'; aka Japanese Scholar Tree
Red Maple 40-60'	<i>Acer rubrum</i>	Excellent yellow and red fall foliage, i.e. 'Autumn Flame', 'October Glory' and 'Red Sunset'
Sweetgum 60-75'	<i>Liquidambar styraciflua</i>	Yellow/scarlet fall foliage, 1 1/2" diameter spiny fruit
Tupelo 40-70'	<i>Nyssa sylvatica</i>	Rich burgundy fall foliage
Turkish Filbert 40-50'	<i>Corylus colurna</i>	Hardy tree tolerant of drought with scaly bark
Yellowwood 30-50'	<i>Cladrastis lutea</i>	Creamy white pendulous flowers, smooth gray bark and golden yellow fall foliage
Zelkova 50-80'	<i>Zelkova serrata</i>	Vase shaped crown, exfoliating bark and tolerant of urban conditions i.e. 'Village Green' and 'Green Vase'

Hardy Tall Growing Conifer Trees

Set back a minimum of 25-30' from power lines (depending upon species and geographical terrain).

Common Name	Latin Name	Features/Cultivars
Bald Cypress 60-80'	<i>Taxodium distichum</i>	Deciduous conifer with orange/brown fall foliage and buttressed trunk
Dawn Redwood 70-100'	<i>Metasequoia glyptostroboides</i>	Deciduous conifer with orange/brown fall foliage and buttressed trunk
Japanese Cedar 50-60'	<i>Cryptomeria japonica</i>	Conical evergreen with unique yet attractive needles
Spruce 50-80'	<i>Picea spp.</i>	Pyramidal evergreen i.e. Norway, White, Blue, Serbian and Oriental
White Fir 50-80'	<i>Abies concolor</i>	Adaptable fir with long blue-green needles; best fir for New England
White Pine 50-80'	<i>Pinus strobus</i>	Wide spreading evergreen with horizontal branches and soft plummy needles

NOTE: Those trees listed with an asterisk (i.e. Goldenchain Tree*, Siebold Viburnum*, Amur Corktree*, Goldenrain Tree *) should be planted in maintained sites only as they may become invasive.

NOT Recommended

Norway Maple, Silver Maple and Willow (weak wooded and prone to storm damage), Bradford Pear (structurally weak and prone to storm damage) and Canadian Hemlock (susceptible to Hemlock Woolly Adelgid)