



SMALL TREES FOR SMALL SPACES

Looking for the perfect tree for a small yard? Selecting the right tree and planting it in the right place around power lines can eliminate potential safety hazards and helps maintain the reliability of your electric service. Careful consideration will also allow your tree to achieve its proper height and form. This pamphlet aims to help you make informed decisions about appropriate tree selections and plantings with an emphasis on varieties that have a mature height under 25 feet with canopies of similar width.



Empire District Electric
Vegetation Management
P.O. Box 127
Joplin, MO 64802
Phone: 1-800-206-2300

S M A L L T R E E S I N S M A L L S P A C E S



SERVICES YOU COUNT ON



This brochure was created for customers in The Empire District Electric Company service territory (USDA Hardiness Zone 6).



ROBIN HILL SERVICEBERRY

These low-growing trees possess attractive bark, flowers and berries. Their graceful appearance makes them very desirable as an ornamental specimen in a landscape. Attracts butterflies and songbirds.



HEIGHT: 20'-25'
CANOPY SPREAD: 12' - 15'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 25'

The Downy Serviceberry is a similar tree in both mature height and spread.



EASTERN REDBUD**

A small, spring flowering tree with graceful ascending branches. Unless pruned to a single stem, Eastern Redbuds commonly have multiple trunks. Reddish buds open to reddish-purple heart-shaped leaves. Leaves turn dark green then yellow in fall. Spectacular flower display before leaf out.



HEIGHT: 20'-25'
CANOPY SPREAD: 20' - 25'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 25'

Also native to eastern Kansas, Oklahoma, and Texas.

SAFETY FIRST

ELECTRICITY CAN BE DEADLY; IT MUST BE TREATED WITH THE UTMOST CARE AND RESPECT. IMPROPER OR CARELESS TREE PRUNING AROUND POWER LINES CAN CAUSE SERIOUS OR FATAL ACCIDENTS. FOR YOUR SAFETY, PLEASE REMEMBER THE FOLLOWING TIPS:

- Always check for power lines before pruning trees. If a branch is too close (within 10 feet) to a primary line, call us at 1-800-206-2300. If you would like a tree pruned or removed for landscaping purposes (near your service line), you'll need to hire a private tree removal contractor to perform the work. If necessary, Empire can temporarily disconnect a service line for their worker's safety. Call 1-800-206-2300 three days in advance to schedule the disconnect.
- Remind children to stay safe -
 - Don't climb or build forts in trees near power lines.
 - Do not climb power poles, transmission towers or substation fences.
 - Fly kites in open areas, far away from trees and power lines. If a kite does get caught in a power line, release the string.

PRUNING IS AN IMPORTANT PART OF PROVIDING SAFE AND RELIABLE ELECTRICAL SERVICE. WE TAKE PRIDE IN HAVING A PROFESSIONAL TREE MAINTENANCE PROGRAM.



EMPIRE HAS BEEN RECOGNIZED WITH THE TREE LINE USA AWARD FOR SEVERAL YEARS IN A ROW BY THE NATIONAL ARBOR DAY FOUNDATION FOR OUR VEGETATION MANAGEMENT PRACTICES.

For more information or to contact us visit:
www.empiredistrict.com/trees or
VegetationManagement@empiredistrict.com
or www.facebook.com/EmpireDistrictElectric

- Before digging holes for planting trees, installing sprinkler systems or fence posts, call 811 to reach your state's free underground utility locating service.
- Never touch or go near a fallen power line, and do not touch anything on which the wire is resting. If you see a downed line, tell others to stay away and immediately call us at 1-800-206-2300.
- Look up! Whenever you're working outdoors, be aware of the location of overhead power lines. Be careful not to lift ladders, pruning shears, irrigation pipes or other tools around power lines.
- Overhead power lines are not insulated. For your safety, treat all lines you see as energized and dangerous — stay away from them.

ADDITIONAL OPTIONS

Below are a few of the many options that are suitable for planting in small areas or near power lines. Please visit your local nurseries for more options and information on trees and shrubs available in your area.

TREE SPECIES	HEIGHT / SPREAD	DISTANCE FROM LINES
Red Buckeye**	10'-20' H/10'-20' S	20'
Flowering Crabapple	6'-10' H/6'-12' S	12'
Kousa Dogwood	15'-25' H/25' S	25'
Christmas Jewel Holly	10' H/6'-8' S	10'
American Hornbeam	10'-15' H/10'-15' S	15'
Ann Magnolia	8'-10' H/10' S	10'
Dr. Merrill Magnolia	15'-25' H/15'-25' S	25'
Star Magnolia	15'-25'H/15'-30'S	25'
Teddy Bear Magnolia	16'-20'H/10'-12' S	20'
Japanese Red Maple	15'-25'H/20' S	25'
Paperbark Maple	25' H/ 15'-20'S	25'
Dwarf Chinkapin Oak	13'-20' H/13'-20' S	20'
American Plum	15' H/ 15' S	15'
Downy Serviceberry	15'-25' H/15'-25' S	25'
Dwarf Norway Spruce	3'-4' H/3'-6' S	4'
Dwarf Apple Tree	8'-10' H/8'-10' S	10'
Dwarf Cherry Tree	8'-10' H/8'-10' S	10'
Peach Tree	12'-15' H/15' S	15'



FRINGETREE **

A small tree, beautiful in full bloom. Perfect for buffer strip planting, parking lots, near decks or patios, narrow tree lawns or residential yards. Strongly fragrant flowers and attractive purplish-blue fruit in summer.

HEIGHT: 12'-20'
CANOPY SPREAD: 12' - 20'
GROWTH RATE: SLOW
DISTANCE FROM THE WIRE ZONE: 20'

Attracts butterflies and birds.



PAGODA DOGWOOD **

Fragrant creamy-white flowers in early spring. Bluish-black fruit on red stems in summer. Reddish-purple fall color. Attracts songbirds.

HEIGHT: 15'-25'
CANOPY SPREAD: 25' - 35'
GROWTH RATE: SLOW
DISTANCE FROM THE WIRE ZONE: 25'

Kousa Dogwood is a similar tree that tolerates moist soil conditions and full sun.



EMERALD GREEN ARBORVITAE

Great evergreen tree that works as a hedge or screen. For a screen plant 2'-3' apart.



HEIGHT: 10'-15'
CANOPY SPREAD: 3' - 4'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 15'

These trees/shrubs are drought tolerant and can be pruned.

SAUCER MAGNOLIA

Small low-branched tree or multi-stemmed shrub with large pink flowers early in the spring. Shiny, dark green oval shaped leaves appear after flowers.



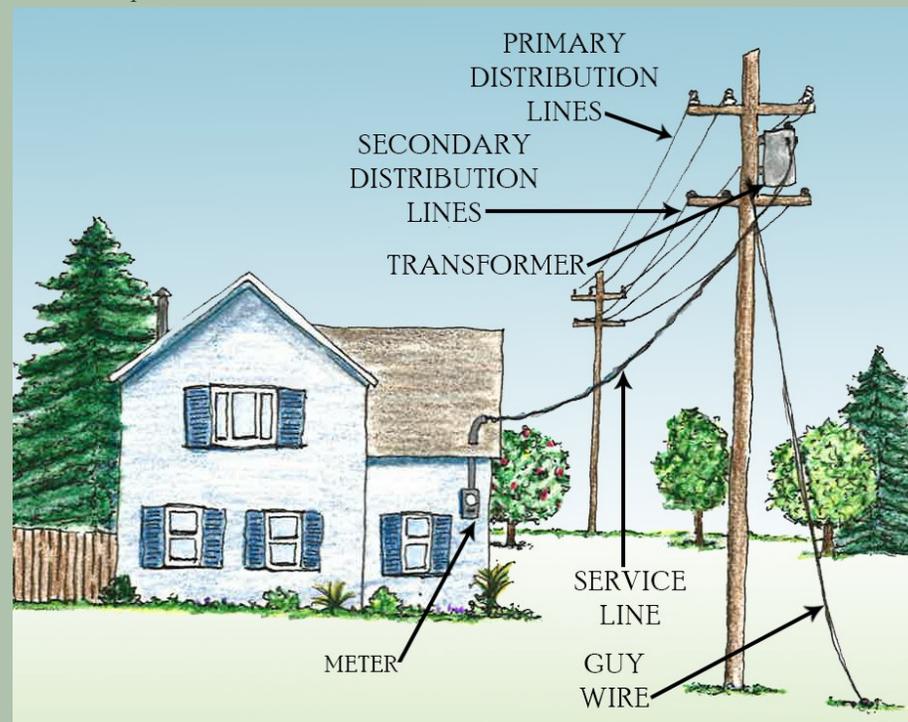
HEIGHT: 20'-25'
CANOPY SPREAD: 20' - 25'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 25'



Ann Magnolia, Star Magnolia, Dr. Merrill Magnolia, and Teddy Bear Magnolia are similar trees or multi-stemmed shrubs.

SERVICE DROP

The service line is the wire from the pole to your home or business; and it transports your electricity to the establishment. In the case where your meter is on a pole away from the building, your responsibility will usually start where the service wires are attached at the top of the pole. Service wires do not require the same clearance from trees as our distribution or transmission wires. Like the majority of utilities nationwide, these lines are not cleared by Empire. They can be cleared by a contractor hired by the home or business owner. We recommend you hire a professional tree service to do this trimming. Empire's line crews will temporarily disconnect the lines so the contractor can safely clear or remove trees. We will reconnect the line once the work is completed. Please call Empire at 800-206-2300 approximately 72 hours in advance to schedule the service drop.



PAD-MOUNT TRANSFORMER

If there is a pad-mounted transformer in a public utility easement across your property, please maintain a clear ten foot path in front of the unit; where the transformer's door opens; and five feet on the other three sides.



Ornamental Grasses

- Fountain Grass **
- Maiden Grass**
- Switch Grass**
- Little Bluestem** (Above)

Shrubs

- Arrowwood Viburnum**
- Lead Plant** (Right)
- Ninebark**
- Burning Bush



GRASSES AND SHRUBS

There are a number of ornamental grasses and shrubs that can be used around utilities. It is important to review the mature heights and spreads of the plant you choose to use. The same clearance requirements will still apply. A few examples are listed below.

PLANT NATIVES!

When thinking about adding new plants or trees to your yard consider plants and trees that are native to our area. There is a wide variety of native wildflowers, grasses, shrubs and trees that would make a beautiful addition to your landscape. Natives are not only low maintenance, but can provide three to four season interest to your landscape.

Benefits of using native plants in your yard:

- They are adapted to our climate.
- They are adapted to our soils.
- They require little or no irrigation after they are established.
- They seldom require fertilizer or pesticides.
- They provide food and cover for butterflies, birds and other wildlife.

Native plants in this brochure have been denoted with an **. For more information on native plants please visit www.grownative.org, www.missouribotanicalgarden.org, mdc.mo.gov or your local nursery.



THE RIGHT TREE IN THE RIGHT PLACE

With care and good stewardship, trees provide both aesthetic and economic benefits. The trees you plant remove CO₂ from the air, produce oxygen, and give songbirds a home. Trees provide many other benefits as well:

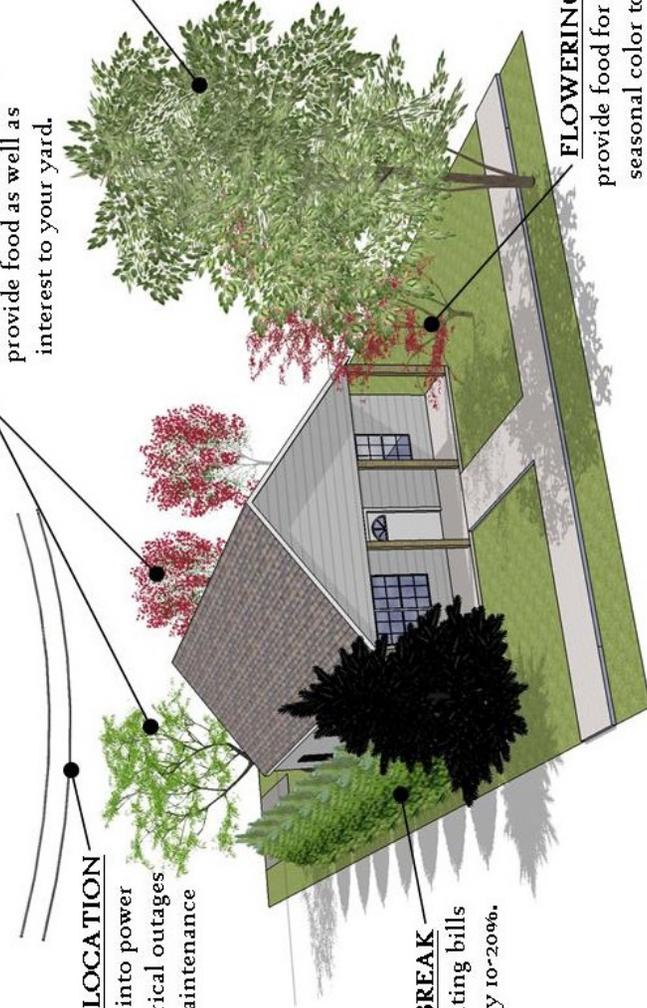
FRUIT AND NUT TREES
provide food as well as interest to your yard.

POWER LINE LOCATION
Trees that grow into power lines cause electrical outages and increased maintenance costs.

**STREET TREES/
SHADE TREES**
shade the concrete, help cool the entire neighborhood, and can cut cooling costs approximately 15-35%.

A WINDBREAK
can lower heating bills approximately 10-20%.

FLOWERING TREES
provide food for wildlife and seasonal color to your yard.





WINTER KING HAWTHORN

Attractive flowers, fruit and growth habit makes this a good choice for small yards. During the summer, clusters of white flowers appear. In the fall the leaves turn gold, red and purple. Bright red fruit appears in the winter.



HEIGHT: 20'-25'
CANOPY SPREAD: 20' - 25'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 25'

This tree provides multi-season interest. The English Hawthorne is of similar growth habit.



SMOKE TREE

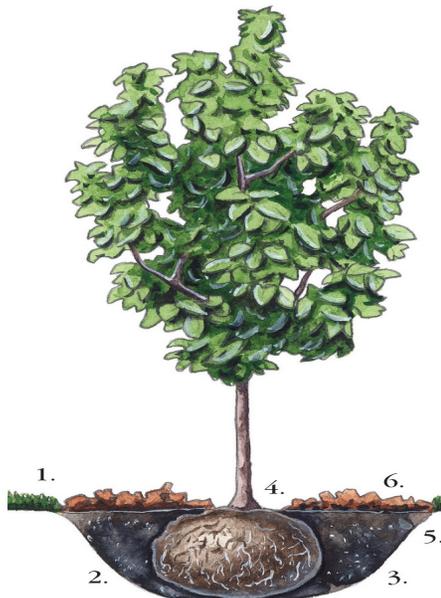
A shrub or small tree perfect for a shrub border or massing for hedges. The plant has some finely divided parts that give the appearance of smoke from a distance. The Royal Purple variety has showy red-purple leaves that turn scarlet in the fall.

HEIGHT: 12'-15'
CANOPY SPREAD: 10' - 15'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 15'

Unique tree works well as a specimen or accent tree/shrub. The American Smoketree is native to our area.



Six things you should know when planting a tree.



1. Call Before You Dig - Several days before planting, call the national 811 hotline to have underground utilities located.

2. Handle with Care - Always lift tree by the root ball. Keep roots moist until planting.

3. Digging a Proper Hole - Dig 2 to 5 times wider than the diameter of the root ball with sloping sides to allow for proper root growth.

4. Planting Depth - The trunk flare should sit slightly above ground level and the top-most roots should be buried 1 to 2 inches.

5. Filling the Hole - Backfill with native soil unless it's all clay. Tamp in soil gently to fill large air spaces.

6. Mulch - Allow 1 to 2 inch clearance between the trunk and the mulch. Mulch should be 2 to 3 inches deep.

For more tree-planting tips and information, visit arborday.org.

Source:  **Arbor Day Foundation**
 90075201



WEeping BIRCH

The sizing of a weeping birch tree depends greatly on the space you provide for it. This tree features silvery-white peeling bark, green leaves that fade to yellow in the fall and small flowers that produce colorful blooms in the summer.

HEIGHT: 6'-8.5'
CANOPY SPREAD: 10' - 13'
GROWTH RATE: SLOW
DISTANCE FROM THE WIRE ZONE: 8.5'

Several other weeping tree varieties may be suitable for a small or narrow yard.





PANICLE HYDRANGEA

A multi-stemmed shrub or single-stemmed tree, this tree produces large white flowers mid-summer and showy fall color.

HEIGHT: 10'-15'
CANOPY SPREAD: 10' - 15'
GROWTH RATE: FAST
DISTANCE FROM THE WIRE ZONE: 15'

Attracts butterflies and birds.



JAPANESE TREE LILAC

Glossy reddish-brown exfoliating bark is accented by small, ivory-colored flowers. Blooms are in 3"-6" long panicles that blossom in late spring and are quite fragrant. Can be used as an ornamental or an accent tree.

HEIGHT: 15'-20'
CANOPY SPREAD: 12' - 15'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 20'

Can be a multi-stemmed shrub or trained to be a small ornamental tree.



HOLLYWOOD JUNIPER

These evergreens make a great privacy screen. It is considered one of the most artistic evergreens because of its twisting upright branches.

HEIGHT: 15'-25'
CANOPY SPREAD: 25' - 35'
GROWTH RATE: SLOW
DISTANCE FROM THE WIRE ZONE: 25'

Skyrocket Juniper is another evergreen that makes a good privacy screen.



AMUR MAPLE

A small Maple tree with spring flowers and a showy fall display. Perfect for small yards, can be a multi-stemmed shrub or trained to be a small ornamental tree.

HEIGHT: 15'-20'
CANOPY SPREAD: 15' - 20'
GROWTH RATE: MODERATE
DISTANCE FROM THE WIRE ZONE: 20'

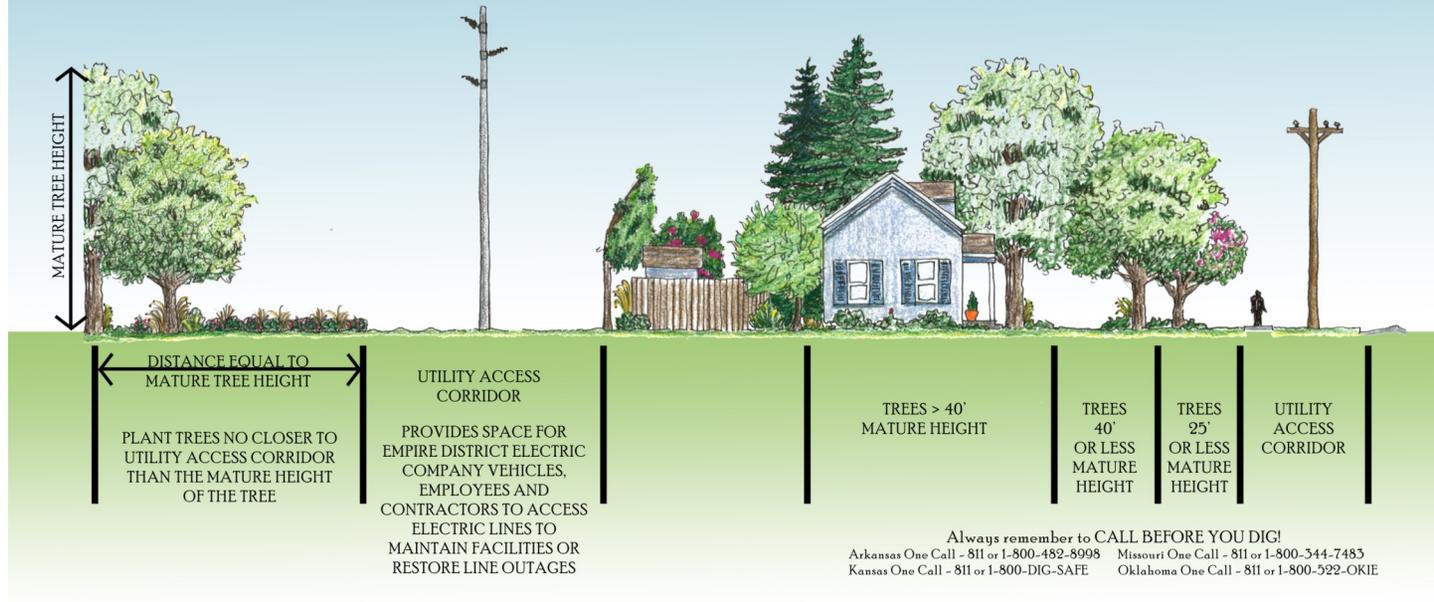
Japanese Red Maple and Paperbark Maple are similar ornamental trees.





UTILITY-WISE PLANTING

The best way to maximize the many benefits provided by trees is to plant them where they will not outgrow their space. If the planted tree is expected to grow tall or expand widely, give it the room it needs for future growth. Trees encroaching on utility facilities may pose significant public safety risks. These border trees are good candidates for removal due to the severity of trimming required. For more information visit our website: www.empiredistrict.com/trees



Trees are of interest to Empire District Electric for a number of reasons. Trees whipped by winds or weighted down by snow will often cause power interruptions that disrupt business, home life, or compromise critical services such as hospitals and police. Improper, careless pruning or falling branches and trees are leading causes of serious and fatal accidents involving contact with power lines. For these reasons Empire has put together important information on how to make sure trees and power lines can peacefully coexist, without compromising safety or reliability. There are different types of high-voltage lines, and utilities have to manage each differently based on their importance.

PLANTING NEAR DISTRIBUTION LINES

Distribution lines are those lines commonly running through neighborhoods. An outage to a distribution line could affect hundreds or even thousands of electric customers. That's why utilities and cities across the country are asking property owners to plant trees that will not exceed 25 feet in height nor a canopy spread at maturity that will encroach within 10 feet of the wire zone of these lines.

PLANTING NEAR TRANSMISSIONS LINES

Transmission lines are high-voltage lines that carry far more energy than distribution lines, between 69,000 and 345,000 volts on our system. These lines are on the tallest, often multi-poled wooden or steel structures. They are the arteries of the electric grid and outages on these lines could affect many thousands of customers. To ensure public safety and service reliability, trees are removed from directly below the transmission lines in the Utility Access Corridor.