

# The right tree in the right place



## Planting trees and shrubs for conservation and safety

### We support proper planting

LES supports proper planting of trees and shrubs in our community, and nurturing and maintaining existing plantings.

This brochure includes suggestions for selecting and locating trees and shrubs so you'll realize the benefits they provide when planted, while reducing conflicts with the facilities that provide you with electric energy.

Trees and shrubs play an important role in our lives, whether we live in the city or rural areas. The benefits we receive from properly planted trees and shrubs are many, including:

- *They consume carbon dioxide and produce oxygen.*
- *They can help us conserve energy, and money, in both summer and winter.*
- *They provide shelter for birds and small animals.*
- *They help control soil erosion.*
- *They serve as privacy screens and noise barriers.*

- *They add character to property.*
- *They add to our aesthetic quality of life.*

Reducing conflicts between electrical facilities and trees and shrubs has a direct impact on you, and the community.



Literally thousands of trees throughout our community have grown to envelop electric power lines.

Specially trained LES arborists work year-round trimming trees so there will be fewer power outages when it is windy or storms move through the area.

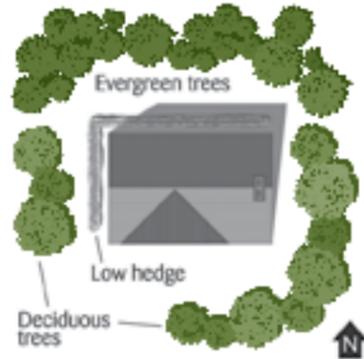
When plants and barriers are located near electrical facilities, such as pad-mounted transformers and switchgear, it requires additional work to trim or remove them. They also can endanger the safety of LES personnel trying to operate and maintain equipment.

Even with these efforts, falling and swaying tree limbs still periodically cause power outages. However, with thoughtful and proper planting of trees and shrubs, such problems and the cost to resolve them will be reduced in the future.



## What trees to plant

There are hundreds of species of trees, and many of them thrive in our region. Not all trees are appropriate for all settings. But there are no good or bad trees, only trees that are thoughtfully selected or poorly chosen.



Typical energy-efficient landscaping

For example, trees can help you reduce both summer cooling and winter heating costs. Walls shaded by trees are as much as 15 degrees cooler than unshaded walls. And, trees and shrubs help reduce winter

heating costs by channeling cold winds away from your home, thus reducing drafts.

To accomplish this, you'll want to select deciduous trees for summer shading. They lose their leaves in winter, so you can take advantage of passive solar heat from the winter sun. For a winter windbreak, you'll want to select coniferous (evergreen) trees and shrubs. Your nursery can help you select trees and shrubs that will help meet these needs.

As another example, planting the proper trees adjacent to overhead utility lines along your property or leading to your home can avoid problems in the future. Included in this brochure are guidelines for selecting trees to be planted adjacent to electric power lines. Again, your nursery can provide more detailed and specific information to assist you in selecting a tree that will not conflict with utility lines and electrical facilities.

Also, Lincoln has a Master Street Tree Program listing which designates the specific types of street trees that may be planted on the public right of way and proper locations. To avoid misunderstandings, you should contact the City Arborist, Lincoln Parks & Recreation Department, at 402.441.7035, before planting any street tree on the public right of way.

## Where to plant your trees

A landscaping plan showing what you want to accomplish with trees and shrubs is extremely useful. Experts recommend you develop such a plan with the assistance of your nursery or another qualified expert.

Your landscaping plan will take into account your goals and desires in planting trees and shrubs; that is, if you want summer shading, if you want a winter windbreak, if you want to increase the value of your property, or if you want to control soil erosion.



You also must consider the location of overhead and underground utility lines and other utility facilities.

Overhead utility lines, whether adjacent to your property or leading to your home, are obvious. The guidelines for planting trees near utility lines, included in this brochure, will help you decide which trees to select and where to plant them.

The location of underground utilities—electrical, telephone, natural gas and cable TV lines—are not so obvious. Once you've decided what you want to plant, and where you would like to plant the trees or shrubs, contact the Diggers Hotline service at 811. They will mark the location of underground utility lines, so you won't accidentally dig into them causing an outage or personal harm.

## When to plant

Fall is the best time to plant most trees. Temperatures are moderate, so there is less chance for the tree to be stressed by extreme heat. Fall moisture helps the tree establish its root system.

Weather permitting, trees also can be planted in early spring. However, such trees will probably need more water their first summer than trees planted in the fall. If possible, it is best to avoid planting trees during hot months.

## Shrubs

Like trees, shrubs can provide you with several benefits. The more obvious include improving the appearance of your property and providing assistance in reducing summer cooling and winter heating needs in your home.

Small evergreen shrubs planted near your home can block the force of winter winds against the foundation. And, deciduous shrubs with dense foliage can block summer heat radiated from hot patios, sidewalks and driveways.

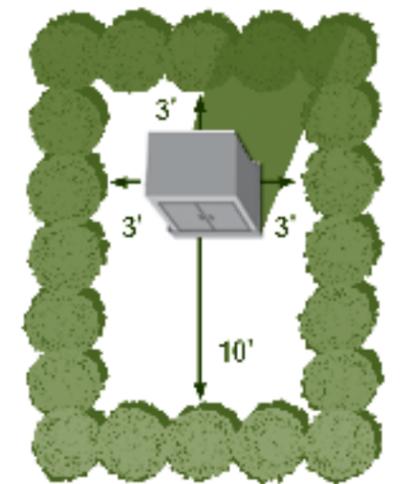
Since about one-half of LES customers receive their electricity from underground lines, there are many pad-mounted transformers and switchgear throughout our community. These are the ground-level, green metal boxes with doors.

Property owners often want to screen this electrical equipment with shrubs or other plantings and sometimes with fences or other materials. LES has no objections to screening, as long as such screening allows adequate space for line technicians and other LES staff to perform necessary work.

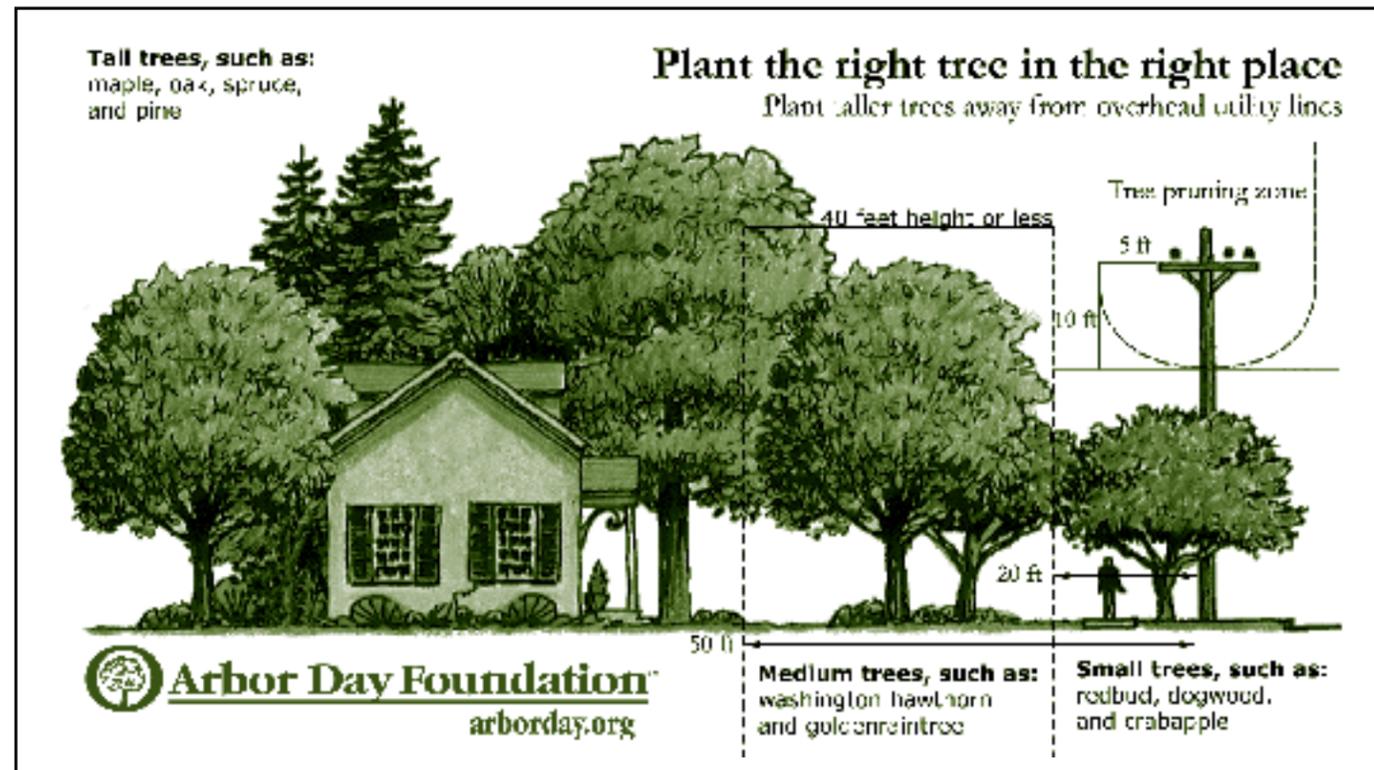
Shrubs can be planted so that when they reach full growth they are 10 feet or more from the front door opening of pad-mounted transformers and switchgear and three feet or more from the equipment on the other three sides. Fences and other screening materials should be placed a similar distance from the equipment.

Included in this brochure is a guideline for selecting shrubs to be planted adjacent to these facilities.

As with trees, you may want to consult your nursery for more detailed and specific information on the large variety of shrubs available in our region. And, before planting shrubs, contact the Diggers Hotline service at 811 to locate underground lines.



Locate shrubs or other screening materials the proper distance from pad-mounted electrical facilities.



## Small trees

Can be planted adjacent to overhead utility lines:

	MATURE HEIGHT
DWARF ALBERTA SPRUCE*	10-15 FT.
AMUR MAPLE	15-20 FT.
EASTERN REDBUD 1	0-25 FT.
SMOKETREE*	15-20 FT.
DWARF FRUIT TREE*	10-25 FT.
FLOWERING CRABAPPLES	10-25 FT.
SAUCER MAGNOLIA*	10-20 FT.
HAWTHORN	15-25 FT.
PURPLE LEAF PLUM	15-20 FT.
UPRIGHT JUNIPER*	10-20 FT.
MUGO PINE*	5-15 FT.
JAPANESE TREE LILAC 1	5-25 FT.
KOUSA & PAGODA	15-20 FT.
SERVICEBERRY	15-20 FT.

## Medium trees

Can be planted 15 feet or more, measured horizontally, from overhead utility lines:

	MATURE HEIGHT
MOUNTAIN ASH*	15-30 FT.
RED CHERRY*	20-40 FT.
CALLERY PEAR	25-35 FT.
SHUBERT CHERRY	20-30 FT.
FLOWERING PEAR	20-30 FT.
CORNUS MAS	25-30 FT.

Can be planted 25 feet or more, measured horizontally, from overhead utility lines:

	MATURE HEIGHT
NORWAY SPRUCE*	40-60 FT.
NORWAY MAPLE	40-50 FT.
RED MAPLE	40-50 FT.
RED OAK	50-60 FT.
WHITE OAK	50-60 FT.
QUAKING ASPEN	35-40 FT.
LINDEN	40-60 FT.
RIVER BIRCH*	40-50 FT.
GREEN ASH	40-60 FT.
THORNLESS HONEYLOCUST	35-60 FT.
KENTUCKY COFFEETREE	40-50 FT.
BLACK HILLS SPRUCE*	40-60 FT.
GINKGO	40-60 FT.
CONCOLOR FIR*	40-60 FT.

\*Trees that are not permitted to be planted on the public right of way in Lincoln.

## Large trees

Can be planted 30 feet or more, measured horizontally, from overhead utility lines:

	MATURE HEIGHT
HACKBERRY	50-70 FT.
COTTONWOOD*	70-90 FT.
COLORADO BLUE SPRUCE*	40-70 FT.
BUR OAK	70-80 FT.
DOUGLAS FIR*	60-80 FT.
SUGAR MAPLE	50-70 FT.
EASTERN WHITE PINE*	50-70 FT.

Trees that are not permitted to be planted on the public right of way in Lincoln.

## Shrubs

Can be planted 10 feet or more from the front door opening of pad-mounted transformers and switchgear and three feet or more from the equipment on the other three sides:

UPRIGHT JUNIPER	ELDERBERRY
YEWS	HONEYSUCKLE
FIRETHORN	DOGWOOD
SNOWBERRY	EUONYMUS
CORALBERRY	COTONEASTER
AMERICAN PLUM	SUMAC (DWARF)
CHOCHECHERRY	AMELANCHIER
SPIREA	VIBURNUM (CRANBERRY)
BARBERRY	BUCKTHORN

NOTE: Fences and other screening material should be placed a similar distance from equipment.

For more information, call LES at 402.467.7537 or go to [www.les.com](http://www.les.com).