

MANAGING TREES NEAR POWER LINES

A CUSTOMER'S ANSWER BOOK



A CUSTOMER'S ANSWER BOOK TO COMMONLY ASKED QUESTIONS ABOUT AUSTIN ENERGY'S TREE PRUNING PROCESS

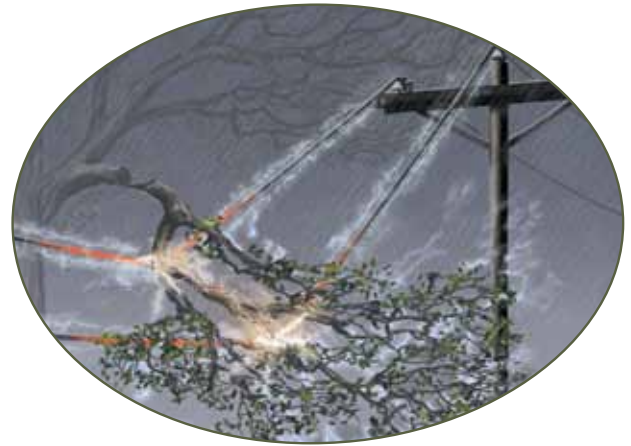
Why does Austin Energy prune my trees?

Power outages and personal safety. In Austin, tree limbs are the most common cause of power outages. In normal weather, tree limbs that rub against power lines can cause voltage fluctuations or outages, burn the power lines and tree limbs, and allow squirrels to access the lines, causing additional outages. During storms, tree limbs can break off or hit against power lines, damaging equipment and hindering repair crews.

Trees growing near power lines greatly increase the chance of electric service interruption. They pose an unnecessary risk to those dependent on life support. They also compromise public safety devices such as fire alarms and traffic signals. They increase the likelihood of fires from arcing electricity, serious injuries or fatalities to children climbing trees too close to power lines, and electrical shock and injury to anyone in the vicinity of an energized tree. For these reasons, the National Electrical Safety Code requires Austin Energy to keep branches clear of power lines.

How often will you prune my trees?

Every four to five years. Austin Energy models its tree pruning program after the four to five year standard that electric utilities use nationwide. This means that your trees will be pruned enough to keep limbs clear of the power lines for four to five years. The four-to-five year trim cycle is ideal because it protects the

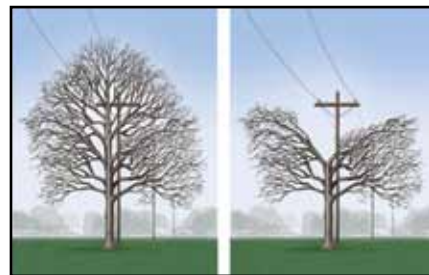


health of your trees and still manages the significant expense of tree pruning.

Austin Energy's trim cycle requires pruning along 2,345 miles of power lines. Each year, 470 to 580 miles of power lines are scheduled for clearing, equal to pruning trees on 12,000 properties a year.



Two types of trims are generally used to remove tree limbs growing too close to power lines. A "side" trim removes all limbs on one side of the tree near the power line.



A "through" trim removes limbs in the center of the tree, allowing the power lines to pass through the middle.

How do you decide to prune trees?

We use "best practices." Austin Energy follows "best practices" guidelines for tree pruning set forth by the American National Standard Institute (ANSI) and endorsed by the National Arbor Day Foundation and the International Society of Arboriculture.

We prune by circuit. Austin Energy's service area is comprised of about 300 circuits (smaller lengths of power line 1-20 miles long) that deliver power to specific areas of Austin. We prune a circuit from beginning to end, rather than at individual locations. This is the most effective way to make sure that the entire line is clear of obstructions. If a portion of the circuit is not pruned and a tree limb falls on the line, the entire circuit may experience a power outage.

We consider oak wilt and bird habitat.

Austin Energy tries to avoid scheduling pruning in neighborhoods with mainly red oak and live oak trees between mid-February and June when oak wilt is more likely to spread.

In areas that provide habitat for the Golden-cheeked Warbler and the Black-capped Vireo, Austin Energy avoids pruning from March through September. The habitat consideration generally applies to undeveloped areas west of MoPac (Loop 1).

We prune to restore power. Storms with heavy winds, hail, sleet and ice frequently cause damage to power lines. Branches can break off and hit against power lines in strong winds. Ice can form on branches, causing them to sag into and break power lines. These tree limbs must be removed before power can be restored. After these storms, it is often necessary to have as many tree trimming crews as repair crews working.



We prune in emergency situations. Austin Energy responds to calls from customers about hazardous conditions near power lines. Any customer who notices an unsafe condition caused by a tree contacting a power line or is experiencing electrical problems is encouraged to call **Austin Energy at 322-9100 or 494-9400**. These numbers are staffed 24 hours a day, seven days a week. We will investigate and, if necessary, bring in a crew to prune for safety or outage issues.

Note: Austin Energy does not prune tree limbs that contact the lower lines on the pole for telephone and cable. The electric lines are at the top and middle of the pole.

How do you work with homeowners?

Every way we can. Austin Energy has created a process for pruning your trees that is designed to make sure that you and your neighborhood are aware of the scheduled work and your options as an Austin Energy customer.

1. We notify your neighborhood leaders.

Austin Energy is one of the few utilities in the country that gives early notification of line clearance trimming to the neighborhood. Your neighborhood association president will receive a letter announcing the planned pruning within the boundaries of the neighborhood.

2. We come to your door. About two weeks after notifying your neighborhood association president, we visit each property to assess the need for line clearance. The property owner will have the opportunity to discuss the work that needs to be done on the trees with a trained work planner assigned by the forestry division of Austin Energy. A work plan is prepared that indicates the work required for each affected tree. These trees will be marked with green Austin Energy ribbons for pruning or pink Austin Energy ribbons for removal.

3. We leave information. If you are not home at the time of the assessment, the work plan will be left on your door. If you wish to discuss it, call the number on the door hanger to schedule a visit.

Note: If you are not the property owner, please notify Austin Energy, and make sure that the owner of the property is aware of the tree-pruning assessment that is under way.

4. If we don't hear from you, we'll try to reach you. If you're not home during the pruning assessment and you do not call the number on the door hanger, your work planner will try to contact you. If all efforts to reach you fail, a certified letter with a copy of the work plan will be mailed to the property owner. That letter will specify the approximate dates when the pruning will occur.

What happens next?

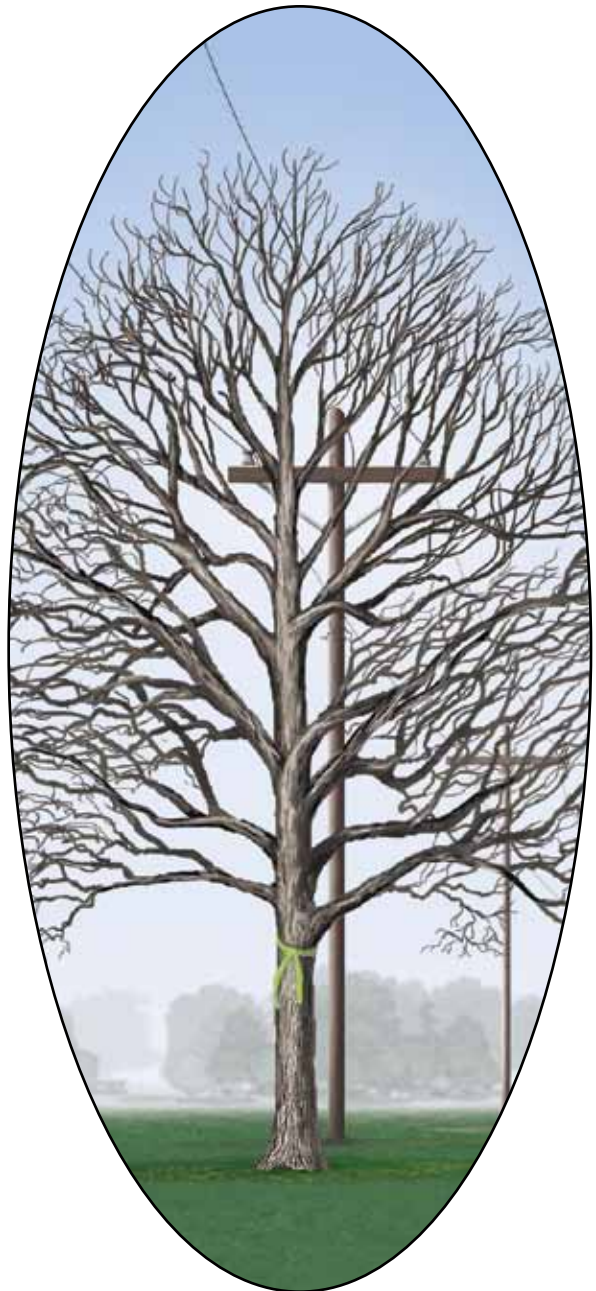
Property owners agree to the work.

Our goal is to meet with each property owner, discuss the work to be done in detail, achieve an understanding and obtain signatures on the work plan.

What if I don't agree with the work plan?

If you are not satisfied with the work plan after meeting with your work planner, you can request a meeting with an Austin Energy staff member. They will work with you to attempt to reach an agreeable solution. If you are still not satisfied after all discussions, and all reasonable options are exhausted, you will receive a certified letter indicating when the work will be done on your property.

Note: Generally we can arrive at an agreement. Austin Energy receives less than 50 refusals from owners each year (out of 12,000 properties).



Trees that will be pruned are marked with a green Austin Energy ribbon, and those designated for removal are marked with a pink Austin Energy ribbon.

When do you recommend tree removal?

There are three primary reasons for tree removal.

Removals are recommended for fast-growing trees such as hackberries or chinaberries that are difficult to control near power lines. Removal is also recommended for any tree that is diseased, dying and decaying or at risk of falling onto power lines. Occasionally, removal is recommended because the tree might not survive the necessary pruning or may become hazardous as a result of the necessary work.

What is the process for tree removal?

Removal of large trees requires a permit.

Under the City of Austin's Tree Protection Ordinance, if the diameter of the tree is 19 inches or greater, or if it is necessary to remove a large percentage of the canopy of a 19-inches diameter or larger tree, a permit must be obtained from the Planning and Development Review Department. Representatives from that department must issue a permit before the work can be done.

Removal of medium-sized trees requires authorization. If tree removal is recommended for a tree that is between 8 and 19 inches in diameter, it must be reported to the Planning and Development Review Department. The Department must authorize the removal before it can occur.

Do you offer replacement trees?

Yes. All of the trees on the right are offered as replacement trees, subject to availability.

When trees must be removed or when a great deal of pruning is required, you may choose from a large variety of utility-compatible replacement trees. We offer 5 to 15 gallon trees, but advise planting the 5 gallon trees because they are more adaptable.

Visit www.austinenergy.com/go/trees for our current tree replacement selection.

Anacacho Orchid Tree

Bauhinia congesta
Deciduous

Sun: Full – Part Sun **Size:** 8-12'

Spread: 6-12'

Has white, orchid-like flower in spring.

Prefers well-drained sites. Deer resistant.



Common Tree Senna

Cassia corymbosa
Deciduous

Sun: Full Sun **Size:** 6-8'

Spread: 6-8'

Showy yellow blooms from summer to fall. Deer resistant.

Crepe Myrtle (dwarf)

Lagerstroemia indica
Deciduous

Sun: Full – Part Sun **Size:** 6-8'

Spread: 3-6'

Crepe Myrtle has very colorful showy blooms throughout the summer. Blooms are white, pink, or red.



Desert Willow

Chilopsis linearis
Deciduous

Sun: Full – Part Sun **Size:** 15-20'

Spread: 15-20'

Has white, pink, or burgundy flowers from spring to fall. Flowers are 3" long and trumpet shaped. Deer resistant.

Evergreen Sumac

Rhus virens
Evergreen

Sun: Sun – Shade **Size:** 8-10'

Spread: 6-8'

White blooms in late summer with burgundy foliage in cool season. Deer resistant.



Eve's Necklace

Sophora affinis
Deciduous

Sun: Full – Part Sun **Size:** 15-20'

Spread: 15-20'

This tree has light pink flowers in 4-6" drooping clusters during spring. Deer resistant.

Flameleaf Sumac

Rhus lanceolata
Deciduous

Sun: Full – Part Sun **Size:** 12-20'

Spread: 10-15'

Bright orange/red color foliage in fall.

Deer resistant.



Goldenball Leadtree

Leucaena retusa
Deciduous

Sun: Full – Part Sun **Size:** 12-20'

Spread: 12-15'

This fast grower produces 1" golden globe flowers from April to October.



Mexican Buckeye

Ungnadia speciosa
Deciduous

Sun: Full – Part Sun **Size:** 12-20'

Spread: 12-20'

The Mexican Buckeye has pink flowers in early spring, is a very good under story tree and needs very little water once established.

Deer resistant.



Mexican Plum

Prunus mexicana
Deciduous

Sun: Full – Part Sun **Size:** 15-20'

Spread: 15-20'

White showy flowers in spring, can produce tart edible fruit.



Possumhaw Holly

Ilex deciduas
Deciduous

Sun: Full – Part Sun **Size:** 12-20' **Spread:** 12'

Produces red berries that stand out on the bare branches during the winter months. Deer resistant.



Roughleaf Dogwood

Cornus drummondii
Deciduous

Sun: Full – Part Sun **Size:** 12-20'

Spread: 15'

Roughleaf Dogwood has tiny white flowers in spring to early summer. Foliage has nice color in fall.



Texas Mountain Laurel

Sophara secundiflora
Evergreen

Sun: Full – Part Sun **Size:** 10-20'

Spread: 8-12'

Has purple fragrant purple bloom in the spring. Is drought-hardy. Deer resistant.



Texas Persimmon

Diospyros texana
Deciduous

Sun: Sun – Part Shade **Size:** 12-20'

Spread: 8-12'

White flowers in spring. Attractive, smooth, gray bark.



Texas Pistache

Pistacia texana
Deciduous

Sun: Full – Part Sun **Size:** 12-20'

Spread: 15-20'

White flowers in spring followed by red 4-6" fruit clusters on female plants only.



Texas Redbud

Cercis canadensis var. *texensis*
Deciduous

Sun: Full – Part Shade **Size:** 15-20'

Spread: 12-15'

The Redbud has bright pink/purple showy flowers forming on twigs in early spring, giving way to wavy, waxy leaves that vary in size.



Wax Myrtle

Myrica cerifera
Evergreen

Sun: Full Sun – Part Shade **Size:** 12-15'

Spread: 15'-20'

Fast growing screen, aromatic foliage and deer resistant.



Yaupon Holly

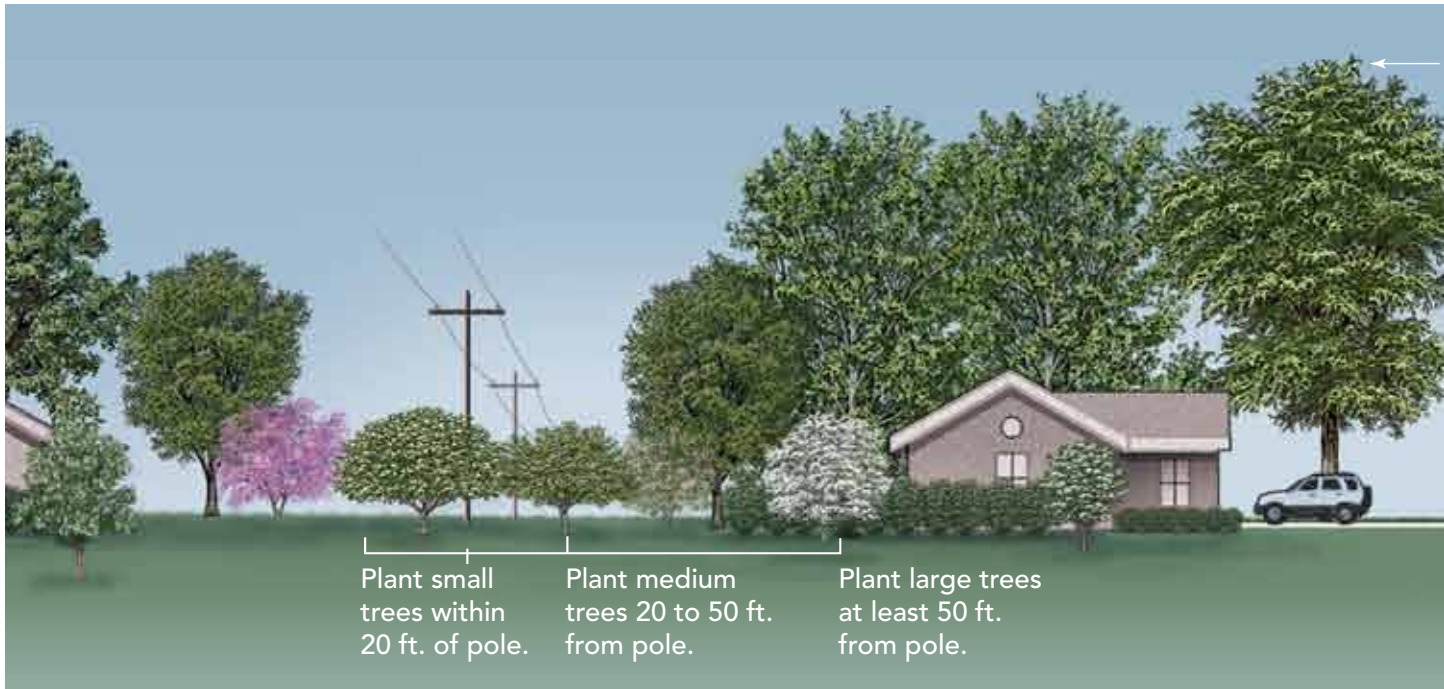
Ilex vomitoria
Evergreen

Sun: Full – Part Sun **Size:** 12-20'

Spread: 10-15'

Female plants produce red berries. These trees are shade tolerant.





Where should I plant my replacement tree?

The key to enjoying the benefits of shading and reduced energy costs is to select the right tree and plant it in the right place.

Plant away from hazards. Within 20 feet of the power lines, trees should be smaller (mature growth should be less than 25 feet high). All of the replacement trees that Austin Energy provides are small trees, so they are compatible with power lines. However, a clear zone of 6 feet from the power pole in all directions should be observed to allow climbing access. Keep trees and shrubs clear of the opening to a pad-mount transformer box. Linemen use a 10-foot long “hot stick” to access this box during power outages.

Allow room to grow. Make sure the tree will have adequate room to grow. The tree must be clear of hazards such as power and utility lines and poles, roofs and gutters and underground electric and water lines.

Locate underground utilities. Electric, water, sewer and telephone lines may run through the area where you want to plant. Call one of the contact numbers in the back of this brochure at least three days before you plant to have underground lines located.



When planting trees and shrubs near pad-mount transformers, leave at least 10 feet for service access in front and 2 feet around the sides and back.

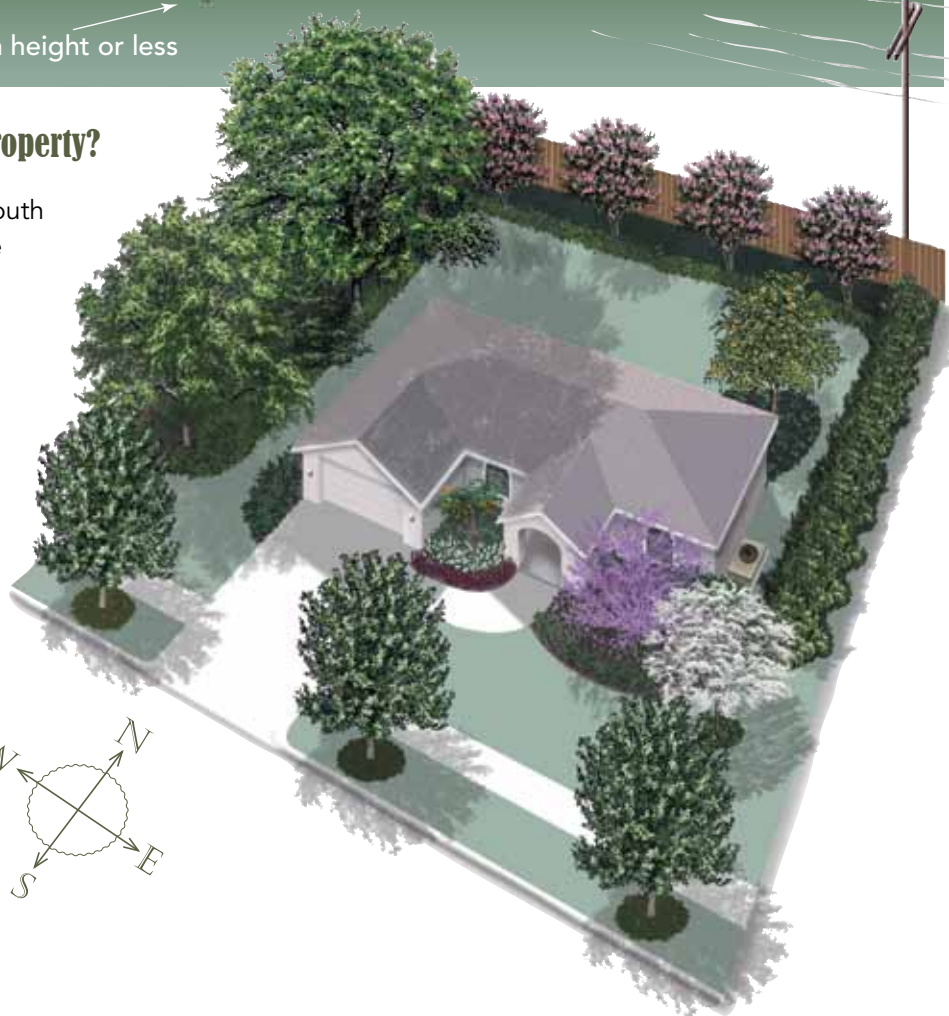
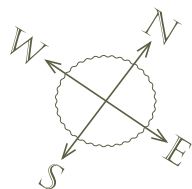
Tall trees: 40 ft. or taller in height

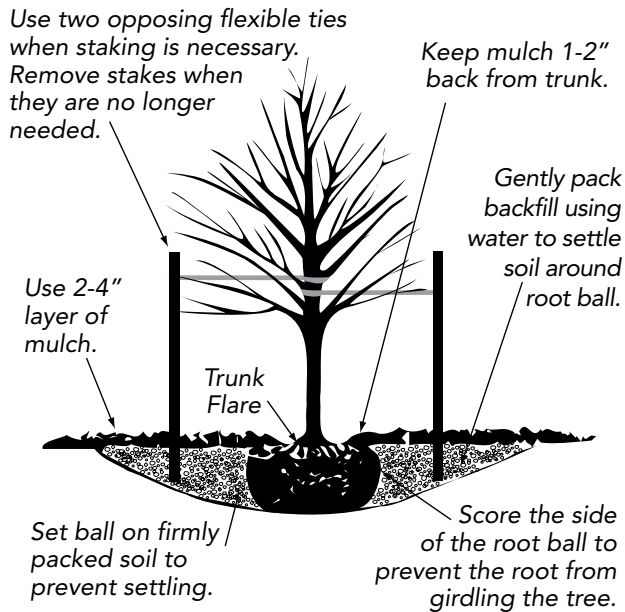
Medium trees: 25 ft. to 40 ft. in height

Small trees: 25 ft. in height or less

How do I plan shade for my property?

Deciduous trees planted on the south and southwest sides of your home help save energy by shading your home in the hot summer, while allowing the sun to warm your home in the winter. If you don't have room to plant a tree, you can plant vines and shrubs near your wall to help insulate your home from the summer heat. When you shade your air conditioner, it operates more efficiently, reducing electric use by up to 10 percent.





How should I plant my tree?

The City of Austin arborists use these guidelines: plant from October through February, when the weather is cool, and the roots have a chance to get established before hot weather sets in.

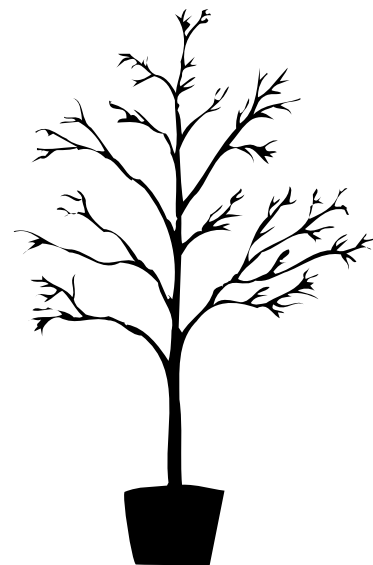
- 1. Dig a wide enough hole.** The hole should be at least 2-3 times the width of the root ball to give new roots room to expand.
- 2. Plant the tree at the proper depth.** The hole should be as deep as the root ball and no deeper. The place on the tree where the trunk flares into the roots should be partially visible when the tree is planted.
- 3. Keep it natural.** Once you have the tree in the hole, straighten it and backfill with the same soil that you dug from the hole. Avoid adding any extra fertilizer or other materials at this time because it can impair how quickly the tree adapts to its surroundings.

How should I water my tree?

Every 7–10 days, your tree needs 15–20 gallons of water. This is more water than your lawn requires. Try this watering method: place the end of the hose at the base of your tree and allow it to trickle slowly for about half an hour. This allows the water to soak deep into the roots. Be sure to set a timer for 30 minutes so you remember to stop watering.

Are there other ways to help my tree?

Protect the area around the base of your tree. Keep lawn chemicals away from your tree. Weed and feed mixtures can harm your tree. Mulch around the base of your tree to hold moisture and to prevent grass from growing too close to the base of the tree (requiring the use of a lawn mower or weed eater – which can damage the trunk of your tree). Make sure your tree is free of nursery ties and tags, which can harm it.



Desirable Tree Structure

How do I prune my new tree?

Pruning is usually needed within the first five years of planting to help the tree establish proper form and strength. The pruning goal is to establish a strong trunk with sturdy, well-spaced branches. The best time to prune is in the fall or winter when the leaves are off the tree.

You will need sharp pruning shears for small trees and a tree saw for large limbs.

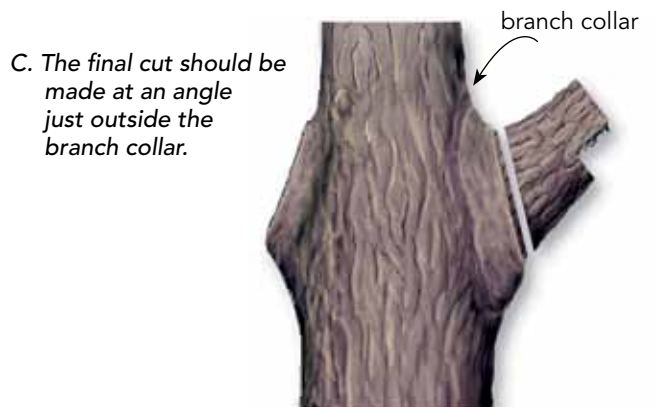
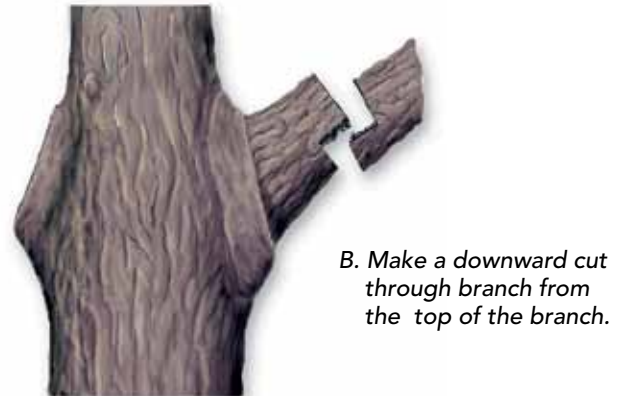
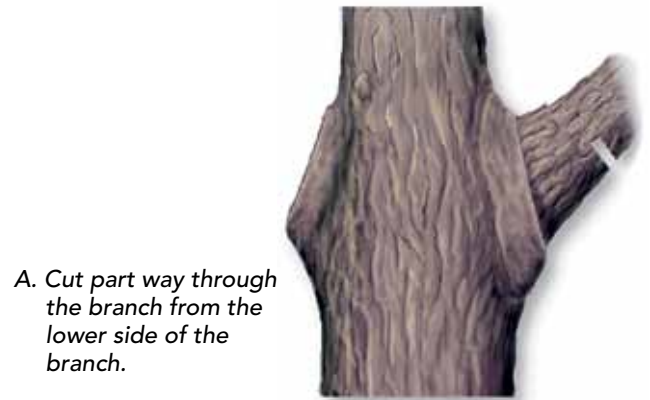
Note: Be aware of the natural shape of the tree, and keep that in mind in Step 3.

1. Sterilize your cutting tools to minimize the risk of spreading oak wilt disease. Pruning paint is recommended for oaks.
2. Start by removing dead, dying and diseased branches.
3. Look at the trunk and identify one main (dominant) trunk. (See diagram to left). You are trying to establish a single trunk that reaches 6 to 8 feet high before it forks. Trees with trunks that fork lower than this are generally weaker and more prone to limb failure. Prune with this in mind.
4. Prune branches that are crossing or rubbing against other branches.
5. Eliminate branches that create narrow v-shaped branch angles.

CAUTION: Newly planted trees do not need to be pruned immediately. Trees need time to establish a root system.

How do I prune large branches?

The branch collar is the bulge formed at the base of the branch. It should be left intact when pruning all branches, large and small.



Are there any other options to having my trees trimmed as described in this booklet?

Customers may pay additional costs for design options. Customers may request a preliminary assessment by a member of Austin Energy's design staff. The cost for the initial consultation is \$100. If relocation of power lines to taller poles or underground is feasible, the project will be designed and an estimated total cost will be provided. The property owner will be responsible for the cost of the design and relocation of power lines if they move forward. Either of these options is likely to be very expensive; the cost varies with the location of the property, the lines and the trees.

Note: Private tree-trimming services are not allowed to work within ten (10) feet of power lines. By Texas law (Health & Safety Code, Chapter 752) and Occupational Safety & Health Administration (OSHA) regulations, only professionals who are authorized by the local utility are allowed to prune or remove trees closer than 10 feet to high voltage power lines. These professionals have been properly trained and equipped to do so. Serious injury or even death can occur when untrained persons or homeowners attempt to prune trees closer than 10 feet to high voltage power lines.

Who cleans up my property after the trimming is done?

Austin Energy contractors. Austin Energy contractor crews will remove all pruned brush and tree limbs from your property. If you request it, they will cut and stack limbs for firewood. You may also request wood chips from your trees if you would like to use them for mulch.

MISSION STATEMENT

Austin Energy recognizes the intrinsic value of trees and works to maintain the overall health of the urban forest. By utilizing professional pruning standards coupled with tree replacement and planting programs, Austin Energy strives to maintain the vitality of the urban forest, while providing safe and reliable electric service to all of our customers.



TREE INFORMATION

www.austinenergy.com

Tree pruning guidelines described in this brochure apply to power lines that distribute power to your home. For pruning guidelines for high voltage transmissions lines, please contact Austin Energy's forestry division.

Austin Energy **494-9400**
Forestry Division
(select 3 for residential, 6 for tree trimming)
or email: utilityforestry@austinenergy.com

Damaged Power Lines **322-9100**
Power Outages

Dial Before You Dig **8-1-1**
1-800-669-8344

Oak Wilt Suppression **974-1881**

Tree removal from streets,
right of ways, sidewalks
alleyways and creeks **3-1-1**

More detailed information is available
on the Web: www.treesaregood.com
www.fs.fed.us and
www.austinenergy.com

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