

CHAPTER 16: TREE AND NATURAL AREA PROTECTION

Sec. 16.101 Purpose

Trees are hereby declared to be of great value in the maintenance of the public health and welfare of the inhabitants of the City and in the conservation of vital energy resources. Trees have a positive economic benefit by enhancing property values and making the city an attractive place to live and do business. These trees should be preserved to the maximum extent feasible for the health, education and enjoyment of future generations.

The purpose of this chapter is:

- (1) To protect, maintain, and manage the City's existing forest resources by providing regulations relating to the cutting, removal, or destruction of protected, heritage and ancestral trees;
- (2) To encourage protection and preservation of the natural environment and aesthetics of the City;
- (3) To provide for replacement of trees removed or destroyed;
- (4) To provide incentives for creative site design which preserves trees while allowing development; and
- (5) To provide regulations for the enforcement and administration of tree protection..

Division 16.200 Removal of Protected, Heritage or Ancestral Trees

Sec. 16.201 Sizes and Types of Protected, Heritage and Ancestral Trees

- (1) **Protected Tree:** Protected trees are those with a diameter of 10 inches or more, measured four and one-half feet above natural grade for the majority of large tree species. A tree with a diameter greater than five inches of the following small tree species shall be considered protected:
 - a. Texas Persimmon (*Diospyrus texana*)
 - b. Texas Mountain Laurel (*Sophora secundiflora*)
 - c. Eve's necklace (*Sophora affinis*)
 - d. Silk Tassel (*Garrya ovata*)
 - e. Big Tooth Maple (*Acer grandentatum*)

In addition trees of all species that meet the size requirements in subsection (1) of this section are protected except the following species of trees:

- a. Chinaberry (*Melia azederach*)
- b. Chinese Tallow (*Sapium sebiferum*)
- c. Japanese Ligustrum (*Ligustrum japonica*)
- d. Tree of Heaven (*Ailanthus altissima*)

- e. Callery Pear (*Pyrus calleryana*)
- (2) **Heritage Tree.** Any tree with a diameter of 24 inches or more, measured four and one-half feet above natural grade, and is one of the following species:
- a. Texas Ash (*Fraxinus texensis*)
 - b. Bald Cypress (*Taxodium distichum*)
 - c. American Elm (*Ulmus americana*)
 - d. Cedar Elm (*Ulmus crassifolia*)
 - e. All Oaks (*Quercus sp.*)
 - f. Pecan (*Carya illinoensis*)
 - g. Arizona Walnut (*Juglans major*)
 - h. Eastern Black Walnut (*Juglans nigra*)
 - i. Honey Mesquite (*Prosopis glandulifera*)
 - j. Ashe Juniper (*Juniperus asheii*) with no more than two main trunks

In addition, Heritage Tree means a tree that has a diameter of 10 inches or more, measured four and one-half feet above natural grade, and is one of the following species:

- a. Texas Persimmon (*Diospyros texana*)
- b. Texas Mountain Laurel (*Sophora secundiflora*)
- c. Eve's necklace (*Sophora affinis*)
- d. Silk Tassel (*Garrya ovata*)
- e. Bigtooth Maple (*Acer grandidentatum*)

This list of eligible Heritage Tree species may be supplemented.

- (3) **Ancestral Tree.** Any tree listed on the Heritage Tree list that has reached a diameter of 30 inches or more for the large tree category or 15 inches or more for the small tree category.

Sec. 16.202 Prohibited Activities

It is unlawful for any person to remove any protected, heritage or ancestral tree without first securing a tree removal permit. It is unlawful for any person to damage a protected, heritage or ancestral tree, such as damaging over 50% of the critical root zone, tree topping, over-pruning, or chemical poisoning. It is unlawful for a person to continue work or removal of trees when the City Arborist has issued a stop work order.

Sec. 16.203 Tree Removal Permitting Process

(1) Protected, Heritage or Ancestral Tree Removal through the Site Plan Process

For commercial and residential site development tree removal requests, tree surveys, tree protection plans and tree replacement plans shall be submitted with the building permit application. A tree inventory or partial tree survey in lieu of a tree survey may be accepted to

document trees within the limits of construction for small residential projects. Final approval of the site plan shall constitute approval for tree removal.

(2) Tree Removal Permit (No Site Plan)

An application for the removal of a protected, heritage or ancestral tree must specify:

- a. The approximate location of the tree;
- b. The diameter of the trunk of the tree, as measured four and one-half feet above natural grade level;
- c. The approximate crown size of the tree;
- d. The species and/or common name of the tree;
- e. The approximate size of the lot, tract, or parcel on which it is located;
- f. A photograph of the tree;
- g. The reason for the proposed removal; and
- h. Such other information as may be reasonably required by the City.

Sec. 16.204 Action on Tree Removal Permit Application

Upon receipt of a tree removal permit application, the City shall inspect the subject tree. The Director of Public Works and Environmental Services upon recommendation by the City Arborist shall approve or deny the application in accordance with the provisions of this Chapter. The tree removal permit will be processed within 15 working days of date of receipt. Approval from the City Arborist to remove dead or hazardous trees may be given before the permit has been completed.

Sec. 16.205 Tree Removal or Relocation

A protected tree may be removed or relocated without replacement once a tree removal permit is granted if:

- a. The protected tree is damaged by natural causes or is diseased beyond the point of recovery;
- b. The protected tree is removed as a safety measure because it is in danger of falling;
- c. The protected tree is dead;
- d. Relocating a protected tree to a suitable location that is beneficial to the long-term growth and survival of the tree on the same property or off site. The applicant must comply with generally accepted transplanting methods as described in the Urban Forest Management Plan and the tree survives for a period of two years. During the two-year period, the applicant is required to provide ongoing watering and monitoring to increase chance of survival.

A protected tree may be removed with replacement if:

- a. The protected tree is located as to prevent reasonable access to the property; or
- b. The location of the protected tree precludes all reasonable and lawful use of the property on which it is located.

A heritage or ancestral tree may only be removed if:

- a. The tree is dead;
- b. The tree is an imminent hazard to life or property and the hazard cannot be reasonably mitigated without removing the tree; or,
- c. Is diseased and;
 - i. Restoration to sound condition is not practicable; or,
 - ii. The disease may be transmitted to other trees and endanger their health.

A variance request may be made to City Council to request removal of a heritage or ancestral tree. The following criteria should be used to determine variance approval:

- a. The applicant has applied for and been denied a variance, exemption, modification or alternative from another City code provision which would eliminate the need to remove the heritage or ancestral tree; and
- b. Removal of the heritage or ancestral tree is not based on a condition caused by the method chosen by the applicant to develop the property, unless removal of the heritage or ancestral tree will result in a design that will allow for the maximum provision of ecological service, historic and cultural value of the trees on the property.

Every approval for tree removal shall automatically expire one (1) year from its effective date

Sec. 16.206 Conflicts with Other City Policies and Regulations

In any case where engineering or design standards or City policies or rules establish conditions that cannot be met in a specific situation without removal of a protected, heritage or ancestral tree, the City Council shall determine what specific adverse effect would result from waiver or modification of such standard, policy, rule or application thereof, to the extent necessary to save the tree. If the City Council determines that there is no serious and imminent adverse effect, the standard, policy or rule may be modified or waived. In circumstances involving regulations under the authority of the Board of Adjustment, the Board of Adjustment will have determination and modification authority. All determinations required to be made under this Chapter shall be made before the expiration of thirty (30) working days from the date of the application for approval for tree removal, except in cases requiring Board of Adjustment review which will have sixty (60) working days for approval of tree removal.

Division 16.300 Tree Protection Measures During Construction

Sec. 16.301 Critical Root Zone

During construction, temporary tree protection devices shall be installed at least to the limit of the critical root zone or dripline, whichever is greater, for any protected, heritage or ancestral trees to be preserved when the respective critical root zone is within the limits of construction.

Sec. 16.302 Disturbance to Critical Root Zone (CRZ)

A minimum of 50% of the critical root zone must be preserved at natural grade and with natural ground cover. No cut or fill, any deposit or stockpiling of earthen materials in their natural state, greater than 4 inches will be located closer to the tree trunk than $\frac{1}{2}$ the CRZ radial distance. If more than 50% of the tree's critical root zone is affected by construction the tree may be preserved but replacement plantings must be met as part of the mitigation requirements in accordance with Section 16.400.

Sec. 16.303 Crown Impacts

A maximum amount of 25% of the viable portion of the tree's crown may be removed. If more than 25% of the trees crown is removed for construction the tree may be preserved but replacement plantings must be met as part of the mitigation requirements in accordance with Section 16.400.

Sec.16.304 Hazardous Activities

Activities during construction that are hazardous to the health of any protected, heritage or ancestral trees are prohibited, including but not limited to the following:

- a. Physical damage. Any physical damage, including tree topping, trunk damage, or over pruning.
- b. Equipment cleaning and liquid disposal. Cleaning equipment, depositing or allowing harmful liquids to flow overland within the critical root zone. This includes paint, oil, solvents, asphalt, concrete, mortar, tar or similar materials.
- c. Grade Changes: Grade changes within the limits of the critical root zone unless adequate construction methods are approved by the City Arborist.
- d. Impervious paving. Paving with impervious materials within the limits of the critical root zone and which may reasonably be expected to kill a tree.
- e. Material Storage. Storing materials intended for use in construction or allowing waste materials due to excavation for demolition to accumulate within the limits of the critical root zone.

- f. Tree Attachments. Attaching to a tree any signs, wires or other items, other than those of a protective nature.
- g. Vehicular traffic. Vehicular and/or construction equipment traffic, parking or storage within the limits of the critical root zone, other than on pre-existing approved pavement. This restriction does not apply to single incident access within the critical root zone for purposes of clearing underbrush, vehicular access for emergency services, routine utility maintenance, and emergency restoration of utility services or routine mowing activities.
- h. Utility encroachment. Installation of utilities and appurtenances within the critical root zone or crown except where approved by the City Arborist.
- i. Excavation and trenching. Excavation and trenching within the limits of the critical root zone except as approved by the City Arborist.

Sec. 16.305 Tree Protection Plans

Details and notes prohibiting hazardous activities as generally provided in the Urban Forest Management Plan shall be included on all tree protection plans.

Division 16.400 Tree Replacement

Sec. 16.401 Tree Replacement Regulations

- (1) When protected, heritage or ancestral trees are removed, tree replacement is required as outlined in Table 16.401 except in those provisions contained in section 16.205.
- (2) Replacement trees will also be required to replace any trees that were planted or identified to be preserved in a tree replacement plan, but died within two years of the date the certificate of occupancy was issued.
- (3) Each replacement tree shall be a minimum of two caliper inches unless otherwise approved by the City Arborist.
- (4) Available Planting Area. Replacement trees should be planted on the site or easement from which existing trees are removed. If this is not feasible, a person may initiate a proposal to plant trees off-site. This may be acceptable if the planting site is in reasonable proximity to the project area and approved by the City Arborist.
- (5) Survival Potential. Before agreeing to any replacement option, the City Arborist will assess the probability that trees planted will survive. This typically requires that some type of irrigation system be implemented for a minimum of two years. Irrigation may not be required if it can be demonstrated that, given the size and type of trees planted, the planting site and the time of year the trees are planted, the mortality rate is likely to be low.

- (6) Quantities of Replacement Trees. Replacement tree values will be expressed in terms of caliper inches. The minimum size acceptable for replacement will be two caliper inches. The replacement schedule is located in Table 16.401.

Any condition requiring the planting of a replacement tree(s) must be met within twelve (12) months after removal of the protected tree.

Table 16.401 Tree Replacement Schedule

Type	Protected, Heritage, or Ancestral Tree	Tree Replacement Ratio
Tree Removal Permit	Protected Tree	1/3 of the total diameter
Tree Removal Permit	Heritage Tree	1:1
Tree Removal Permit	Ancestral Tree	2:1
Tree Removal through Site Plan	Protected Tree	1:1
Tree Removal through Site Plan	Heritage Tree	2:1
Tree Removal through Site Plan	Ancestral Tree	3:1

- (7) Types of Replacement Trees. In order to enhance the general quality of the urban forest, certain restrictions will be placed on the types of trees which will be allowed to serve as replacements for trees removed. Unless site conditions prohibit it, 75% of the total caliper inches of replacement trees must be represented by large canopy trees (Table 16.402). The remaining 25 % can be a mixture of small trees (Table 16.402). All trees selected must be suitable to the planting site. A minimum of five different species must be planted if more than 50 caliper inches of trees are required. This is to prevent large monocultures of any single tree species, which increase the chance of disease epidemics. The planting of thin bark red oaks near oak wilt centers is discouraged.

Table 16.402 Tree Replacement List

Large Tree Replacment List	Small Tree Replacement List
Arizona Cypress (<i>Cupressus arizonica</i>) Bald Cypress (<i>Taxodium distichum</i>) Big Tooth Maple (<i>Acer grandidentatum</i>) Bur Oak (<i>Quercus macrocarpa</i>) Catalpa (<i>Catalpa bignoniodes</i>) Cedar Elm (<i>Ulmus crassifolia</i>) Chinese Pistache (<i>Pistacia chinensis</i>) Chinquapin Oak (<i>Quercus muhlenbergii</i>) Chitalpa (<i>Chilopsis x Catalpa</i>) Deodar Cedar (<i>Cedrus deodara</i>) Drake Elm (<i>Ulmus parvifolia "Drake"</i>) Escarpment Cherry (<i>Prunus serotina</i>) Honey Mesquite (<i>Prosopis glandulosa</i>) Lacey Oak (<i>Quercus glaucooides</i>) Little Walnut (<i>Juglans microcarpa</i>) Live Oak (<i>Quercus fusiformis</i>) Monterrey Oak (<i>Quercus polymorpha</i>) Pecans (<i>Carya illinoensis</i>) Texas Red Oak (<i>Quercus texana</i>) Texas Sycamore or Mexican Sycamore (<i>Platanus occidentalis glabrata</i>) Shumard Red Oak (<i>Quercus shumardii</i>)	American Smoke Tree (<i>Cotinus obovatus</i>) Anacacho Orchid Tree (<i>Bauhinia lunarioides</i>) Desert Willow (<i>Chilopsis linearis</i>) Eve's Necklace (<i>Sophora affinis</i>) Flameleaf Sumac (<i>Rhus copallina and glabra</i>) Goldenball Lead-tree (<i>Leucaena retresa</i>) Kidneywood (<i>Eysenhardtia texana</i>) Lindheimer silktassel (<i>Garrya lindheimeri</i>) Mexican Buckeye (<i>Ungnadia speciosa</i>) Mexican Plum (<i>Prunus mexicana</i>) Mexican Redbud (<i>Cercis canadensis var. "Mexicana"</i>) Possumhaw Holly (<i>Ilex deciduas</i>) Smooth Leaf Sumac (<i>Rhus glabra</i>) Red Buckeye (<i>Aesculus pavia</i>) Texas Mountain Laurel (<i>Sophora secundiflora</i>) Texas Persimmon (<i>Diospyros texana</i>) Texas Pistache (<i>Pistacia texana</i>) Texas Redbud (<i>Cercis canadensis var. "Texensis"</i>) Yaupon Holly (<i>Ilex vomitoria</i>)

Sec. 16.402 Tree Fund and Tree Replacement Fee

If the City Arborist determines that adequate planting space is not available an individual may apply for approval to pay a tree replacement fee.

- (1) Establishment of Fund. A tree fund is hereby established.
- (2) Funds to be deposited. Tree replacement fees for the installation of replacement trees shall be deposited in the tree fund. Donations may also be made to the tree fund.
- (3) Fees. Fees are based on the ratio in Table 16.401. Payment is calculated at \$75.00 per caliper inch. Changes to the fee may be adopted periodically by resolution of the City Council.
- (4) Use of funds. Expenditures from the tree fund shall be used solely for the purpose of purchasing and installing trees on public rights-of-way and any other city-owned property and for administering the tree fund.

Division 16.500 Preservation of Natural Vegetation and Indiscriminate Clearing

Sec. 16.501 Preservation of Natural Vegetation

In addition to satisfying the requirements set forth in this Chapter in connection with the removal of protected, heritage or ancestral trees, when site plan review and approval or any other approval by the City Council is required for any development or project, the applicant shall:

- (1) Demonstrate to the satisfaction of the Council that the design has been accomplished to preserve the existing natural vegetation of the site.
- (2) Preserve trees four to 10 inches in diameter, to the extent that such preservation is reasonable and feasible.
- (3) Show the locations of existing trees above four inches in diameter on the site plan..
- (4) Preserve understory and herbaceous vegetation to the extent that such preservation is reasonable and feasible.

Sec. 16.502 Indiscriminate Clearing

As understory and smaller plants provide shelter, food, and place to raise young there shall be no indiscriminate clearing of natural vegetation.

- (1)The indiscriminate clearing of natural vegetation is prohibited without first securing approval of the City, except where the clearing is for the removal of trees or vegetation damaged by natural forces, livestock, and removal of small, non-protected Ashe Juniper (*Juniperus asheii*).
- (2)Application for the indiscriminate clearing of natural vegetation shall be made on a form provided by the City.
- (3)Where practicable, an application for the indiscriminate clearing of natural vegetation shall be combined with any other applications and/or site plans required for specific development projects.
- (4)Applications required under this Chapter shall be approved or denied in accordance with the provisions of Section 16.501 of this Chapter.

Division 16.600 Exceptions, Administration and Enforcement

Sec. 16.601 Exceptions

During the period of an emergency, such as a tornado, flood or other natural disaster the requirements of this article may be waived as deemed necessary by the Director of Public Works and Environmental Services or other designee.

Sec. 16.602 Administration

This Chapter shall be administered by the City Council or its designee who shall oversee regulation of the care and removal of protected, heritage and ancestral trees now and hereafter in the City of Sunset Valley.

Sec. 16.603 Enforcement

- (1) **Stop Work Order.** The City Arborist, Council or other duly authorized City official may order all work, including site clearing or other site preparation, stopped on any site where a violation of this Chapter or of a final site plan is found. Any person, including a workman on the site, who fails to comply with a stop work order shall be guilty of a misdemeanor punishable as provided for in the penalty Section hereof.
- (2) **Revocation of Final Site Plan Approval.** If the City Council finds, after notice and hearing, that a significant violation of an approved final site plan has occurred, the Council may revoke its approval of such site plan. It shall be unlawful for any person to do any work on the site covered by the site plan unless and until a new application for site plan approval has been filed and processed in accordance with the provisions of this Chapter and the Council grants approval to a new final site plan which corrects the violations of the original site plan.
- (3) **Injunction and Other Remedies.** Any tree removal or other work done contrary to any of the provisions of this Chapter or to any of the details contained in any final site plan approved by the City Council or to any of the conditions imposed in connection with the granting of any application required by this Chapter is hereby declared to be unlawful and shall constitute a violation of this Chapter. The Council may direct the City Attorney to initiate injunction, mandamus, abatement or any other action available in law or equity to prevent, enjoin, abate or correct unlawful tree removal or other work.
- (4) **Penalties.** Any person, firm or corporation who violates any provision of this Chapter or any order made under the authority of this Chapter, or who causes or permits any such violations, or who fails to perform any act required hereunder, or does any prohibited act or takes any action contrary to any final site plans approved by the Council or fails to take any action required by such site plan, may be guilty of a misdemeanor, and, if convicted thereof, shall be punished by a fine of not more than one thousand dollars (\$1,000.00) per offense. Each and every day on which any violation is committed or permitted to continue may constitute a separate offense and shall be punishable as such. The owner or tenant of any building, structure or premises and any designer, builder, contractor, agent or other person who knowingly commits, participates in, assists in or maintains such violation may each be found guilty of a separate offense and subject to the penalties as provided herein.