

## DIVISION 2: TREE PRESERVATION AND PROTECTION

### Section 5.5.2.1 General Tree Preservation Requirements for New Nonresidential and Residential Development

- (a) *Application.* The provisions of this Section apply to all new nonresidential and residential development within the City and not within the ETJ. The responsible official shall be the Planning Director.
- (b) *Preservation of Existing Landscape.* The existing natural landscape character, especially native oaks, elms, madrone, and pecan trees, shall be preserved to the maximum extent reasonable and feasible. For example, in an area of the street yard containing a stand of trees, the developer, and the builder shall use best good faith efforts to preserve such trees. *Celtis Occidentalis* (Hackberry), *Juniperus Virginiana*, *Juniperus Ashei* (Common Cedar), Chinaberry, mesquite and *Ligustrum* with a caliper of less than 12 inches are excluded from this provision. Indiscriminate clearing or stripping of natural vegetation on a lot is prohibited. Any part of a site not used for buildings, parking, driveways, walkways, utilities and approved storage areas shall be retained in a natural state, or reclaimed to its natural state, to the greatest extent feasible, or attractively landscaped in a manner that adds aesthetic value to the development.
- (c) *Protected and Specimen Trees.*
- (1) For the purposes of this Article, the caliper of a single-trunk tree shall be measured in accordance with the definition of "caliper" in Chapter 8 of this Code. The caliper of a multi-trunk tree shall be measured by the following equation: The caliper of the largest tree trunk, plus 1/2 the caliper of all other tree trunks. For example, a tree that has three trunks with calipers of 7", 6", and 4" would have a caliper of 12", or  $7" + (1/2 \times 6") + (1/2 \times 4")$ .
  - (2) The removal of any tree with a caliper of nine inches or larger must be specifically requested by the applicant and approved in writing by the designated responsible official prior to any action being taken to remove the tree or to damage or disturb the tree in any way.
  - (3) The removal of specimen trees, which for the purposes of these requirements are trees with 24" caliper or greater, must be specifically requested by the applicant and approved in writing by the designated responsible official prior to any action being taken to remove the tree or to damage or disturb the tree in any way. If the request is not approved by the designated responsible official, the applicant may appeal the decision to the Planning and Zoning Commission. Any specimen tree that is removed shall be replaced caliper-for-caliper (a ratio of one-to-one), even if the tree removed is within the building footprint area.

- (4) The location of all trees over nine inches in caliper to be preserved or removed within the area proposed for development shall be designated on an application for a Site Preparation Permit or a Watershed Protection Plan, Phase 2 (see Chapter 1, Article 7). An aerial photograph indicating the tree canopy shall be submitted with an application for a Watershed Protection Plan, Phase 1, together with a designation of the location of specimen trees in the area proposed for development. Removal of any such trees without City approval is expressly prohibited. Such trees shall be tagged and numbered, and numbers shall be graphically depicted on the applicable plan submitted. The tags and related numbers shall remain on the trees until the Certificate of Occupancy is issued.

### **Section 5.5.2.2 Tree Protection Standards - Residential and Nonresidential Development**

- (a) *Application.* The provisions of this Section apply to all new residential and nonresidential development within the City.
- (b) *Protection of Trees During Construction.*
  - (1) All protected trees next to an excavation site or to a construction site for any building, structure, or street work, shall be guarded with a good substantial fence, frame, or box not less than four feet high and surrounding the trunk of the tree. In addition, at least three inches of mulch or compost shall be spread beneath the drip line of the tree.
  - (2) The barriers shall be approved by the Planning Director and shall be in place before any site clearance or other site-disturbing act commences.
  - (3) All building material, dirt, excavation or fill materials, chemicals, construction vehicles or equipment, debris, and other materials shall be kept outside the barrier.
  - (4) Barriers shall remain in place until the final building and landscape site inspections are satisfactorily completed for the issuance of the Certificate of Occupancy.
- (c) *Action Around Protected Trees.* No person shall excavate any ditches, tunnels, or trenches, place any paving material, or place any drive within the protective zone of any protected tree without first obtaining a written permit from the Planning Director.
- (d) *Damage to Protected Trees.* Unless specifically authorized by the Planning Director, no person shall intentionally damage, cut, carve, transplant, or remove any public tree or shrub; attach any rope, wire, nails, advertising posters, or other contrivance to any public tree or shrub; allow any gaseous, liquid or solid substance

which is harmful to such plants to come in contact with them or with the soil; or set fire or permit any fire to burn when such fire or the heat thereof will injure any portion of any protected tree or shrub.

(e) *Duty of Persons for Trees on Property.*

- (1) It shall be the duty of any person or persons owning or occupying real property bordering on any street upon which property there may be trees, to prune such trees in such manner that they will not obstruct or shade the street lights, obstruct the passage of pedestrians on sidewalks, obstruct vision of traffic signs, or obstruct the view from any street or alley intersection. The minimum clearance of any overhanging portion thereof shall be ten feet over sidewalks and 14 feet over all streets, except truck thoroughfares which shall require a clearance of 16 feet.
- (2) It shall be the duty of any person or persons owning, occupying or controlling real property upon which tree trimming or removal occurs to advise all landscape contractors, tree services, arborists and others who remove or trim trees of the need for proper disinfection of all cutting tools and the required painting of all tree cuts on oak trees with a proper sealant immediately after cutting or pruning to prevent the spread of oak wilt and to ensure such sealing of cuts.

(f) *Removing Tree(s) from Development Site(s)* . The removal of an existing tree(s) from a development site must be in accordance with this and all other applicable ordinances of the City. Prior to the removal of any protected or specimen tree, as defined within this Section, the property owner must first submit a letter to the Planning Director that describes in detail which tree(s) will be removed (as shown on a Site Preparation Permit or Watershed Protection Plan, Phase 2, as applicable), how the removal will be performed (and machinery and equipment needed), and the date and time whereupon the anticipated removal will occur. The letter must also include a notarized statement by the owner that the tree(s) to be removed is (are) either not a protected or specimen tree(s), as defined within this Section, or that its (their) removal will be in complete conformance with the provisions of this Section. The letter must also include a recommendation for removal from a certified arborist or registered landscape architect. Said letter must be submitted at least one week in advance of the removal operation.

(g) *Trees Within the Building Footprint or Within Site Access Areas* .

- (1) Trees over nine inches in caliper but less than 24 inches in caliper that are located within, and within ten feet of the perimeter of, the building footprint, the area over the septic tank, or areas necessary for site access (but not including parking areas), such as a driveway, shall not be required to be preserved or replaced.

- (2) Trees over nine inches in caliper but less than 24 inches in caliper that are located within areas designated for the construction or installation of public facilities such as streets or utilities, shall not be required to be preserved or replaced.
- (3) Trees over nine inches in caliper but less than 24 inches in caliper that are not located within, and within ten feet of the perimeter of, the building footprint, the area over the septic tank, areas necessary for site access, or within areas designated for the construction or installation of public facilities such as streets or utilities, that the property owner requests and receives approval to remove may be removed, but shall be replaced on-site at a ratio of two-and-one-half trees per tree removed and shall be credited toward the number of trees required for site development. Replacement trees shall have a minimum caliper of two inches.
- (4) Any specimen tree (24 inch caliper or greater) that is located within the building footprint, or areas necessary for site access (but not including parking areas), such as a driveway, shall not be required to be preserved. However, the tree that is removed shall be replaced caliper-for-caliper (a ratio of one-to-one). Trees removed shall be approved in accordance with Section 5.5.2.1.

### **Section 5.5.2.3 Credits - Nonresidential and Multifamily Development**

- (a) *Application.* The provisions of this Section apply to all new nonresidential and multifamily development within the City.
- (b) *Incentives to Retain Existing Trees* . As an incentive to retain existing trees in the street yard, exclusive of the trees contained in the buffer required under Section 5.2.7.1, the following shall apply:
  - (1) In order to encourage the preservation of trees that are already established and growing, the additional credit as outlined below shall be given to healthy existing trees of a species listed on the Preferred Plant List in the Technical Manual.
  - (2) Existing trees shall receive existing credit against the landscaping requirements according to the following schedule:
    - a. Greater than 12-inch caliper: credit for two required trees.
    - b. Greater than four-inch but less than 12-inch caliper: credit for one-and-one-half trees.

- (3) Any existing tree in the street yard which is at least six inches in caliper and at least 15 feet tall, shall be considered as two-and-one-half trees for the purposes of satisfying the requirements of Chapter 6, Article 1.
  - (4) Any existing specimen tree (24-inch caliper or greater) shall be considered as a caliper-for-caliper match for the purposes of satisfying the requirements of Chapter 6, Article 1. For example, a 24 inch caliper tree can be counted for up to 12 trees that each have a two-inch caliper.
- (c) *Exclusions* . Celtis Occidentalis (hackberry), Juniperus Virginiana, Juniperis Ashei (Common Cedar), Chinaberry, Mesquite, and Ligustrum are excluded from this provision.

## **ARTICLE 5: TREE AND HABITAT PROTECTION**

### **DIVISION 1: GENERAL**

#### **Section 5.5.1.1 Purpose**

The purpose of this Article is to conserve, protect and enhance existing healthy and safe trees and natural landscape. It is recognized that the preservation of existing trees contribute to the overall quality and environment of the City. Trees can and do contribute to the process of purification, oxygen, regeneration, groundwater recharge, reduction of pollution and contaminants in aquifers, erosion and dust control, abatement of noise, provided wildlife habitat and enhances property values as well as contributing to the requirements established in Article 3 of this Chapter.

### **DIVISION 2: RECLAMATION STANDARDS**

#### **Section 5.4.2.1 Purpose, Applicability, Exceptions and Coordination**

(a) *Purposes.*

- (1) The purpose of this Section is to specify standards and procedures for reclamation or alteration of floodplain land consistent with the City's objectives to maintain water quality, preserve natural areas and trees, assure the safety and welfare of its residents with respect to flood hazards, and to implement in part Master Plan policies relating to environmental quality and open space.

- (2) It is the intent of the City Council that the requirements of this Section be consistent with requirements contained in the City's Flood Damage Prevention Regulations, and with federal requirements pertaining to the Federal Emergency Management Agency's authority concerning flood hazards and the Corps of Engineer's jurisdiction over waters of the United States, including wetlands under Section 404 of the Clean Water Act.
  - (3) It is the further intent of this Section that development on floodplain land be integrated with the City's standards for preserving water quality and providing open space.
  - (4) Land located within the floodplain may be reclaimed or altered for purposes of development only in accordance with the standards and procedures set forth in this Section.
- (b) *Applicability* . The standards in this Division apply whenever a property owner seeks to reclaim, excavate or otherwise alter land within the design floodplain of a waterway that has a contributing drainage area of 120 acres or more. For purposes of this Article, any of the following activities constitute reclamation or alteration:
- (1) Filling in a floodplain;
  - (2) Channelization, impoundment, realignment, deepening, or other modification of a drainage way;
  - (3) Removal of significant tree stands within a floodplain;
  - (4) Site preparation for construction of structures or improvements, including grading or removal of topsoil within a floodplain.

*Authority.* The regulations in this Division are authorized under the City's charter, Tex. Water Code Sections 16.315 and sec. 26.177.

*Exceptions.*

Fill-in drainage ways that are not mapped by FEMA are exempt from the requirements of this Division provided that the watershed area contributing to the floodplain that is affected by placement of fill is wholly owned by the applicant.

*Coordination of applications* . If jurisdictional waters of the United States exist on the property to be reclaimed, the applicant shall provide the City with a copy of all reports, studies, plans and other data that are submitted to the U.S. Army Corps of Engineers in conjunction with an application for approval of a Federal Section 404 permit.

### **Section 5.4.2.2 Preservation of Natural Features**

- (a) *Water Quality Zones on a FEMA Mapped Floodway* . No reclamation or alteration shall be allowed in water quality zones established under Articles 1, 2 or 3 of this Chapter 5, unless authorized by and consistent with a Conditional Letter of Map Revision approved by the U.S. Army Corps of Engineers.
- (b) *Buffer Zones* . No wetlands or other significant natural features shall be reclaimed within a buffer zone established under Articles 1, 2 or 3 of this Chapter 5 unless (1) authorized by and consistent with a Conditional Letter of Map Revision approved by the U.S. Army Corps of Engineers, or (2) authorized under a mitigation plan prepared in accordance with this Division, which demonstrates that reclamation or alteration of the floodplain will improve the water quality of the runoff and/or stabilize an existing area of erosion and will continue the maintenance of flood and flow characteristics of the waterway, and which provides for protection of altered areas during and after alteration and development of adjacent land (also see Article 5 of this Chapter).

#### **Section 5.4.2.3 Floodplain Easements**

Appropriate drainage and flood maintenance easements shall be granted to the City prior to approval of a plat application on all floodplain land that remains following reclamation authorized under the approved Qualified Watershed Protection Plan.

#### **Section 5.4.2.4 Water Surface Elevation**

- (a) *FEMA-mapped Waterways* . For FEMA-mapped waterways, reclamation or alternation in zones A1--30 and AE of the City's or county's FIRM shall not result in an increase in the water surface elevation of the base flood more than one foot at any point within the drainage basin, and, within the floodway, shall not result in any increase in the water surface elevation during occurrence of the base flood, considering the cumulative effect of the proposed development, when combined with all other existing and anticipated development.
- (b) *Other Waterways* . For any other waterway, reclamation of the flood plain shall result in no increase in the 100-year water surface elevation on other properties measured under fully developed watershed conditions. No alteration of the floodplain will be permitted which could result in any degree of increased flooding to other properties, either adjacent, upstream, or downstream.

#### **Section 5.4.2.5 Stream Velocity**

Alterations of the floodplain shall not create an erosive water velocity on- or off-site. The mean velocity of stream flow at the site after fill shall be no greater than the mean velocity of the stream flow under existing conditions. No alteration to the floodplain will

be permitted which would increase velocities of flood waters to the extent that significant erosion of floodplain soils will occur either on the subject property or on other properties whether adjacent, upstream or downstream. Mean channel velocities that exceed six f.p.s. are considered to be erosive.

#### **Section 5.4.2.6 Side Slopes**

- (a) The following standards apply to slide slopes:
- (1) To insure maximum accessibility to the floodplain for maintenance and other purposes, and to lessen the probability of slope erosion during periods of high water, maximum slopes of filled area shall not exceed four feet horizontal to one foot vertical.
  - (2) Soil retention blankets must be installed on all fill slopes to promote the revegetation of the slope.
- (b) Rock gabion construction, decorative stone faced reinforced concrete rip-rap or an approved equal erosion protection measure is required on slopes steeper than 3:1.
- (c) Vertical walls, terracing and other slope treatments will be considered only as 1) part of a landscaping plan submission, and 2) if no unbalancing of stream flow results.
- (d) Grass cover is required for all cut and fill slopes 3:1 or flatter. Fill slopes shall be seeded with at least three herbaceous species including grasses, legumes, and wild flowers, selected from the following list. A minimum of three of the species from the plant list in the Technical Manual for this Section shall be used, one of which must be a flowering species.

#### **Section 5.4.2.7 Mitigation Plans**

The mitigation plan for reclamation or alteration of a buffer zone or other floodplain area may provide for restoration, creation, enhancement, or preservation of aquatic habitats to ensure that activities result in minimal adverse effects to the aquatic environment. The mitigation plan may, but need not be, the same as a mitigation plan required for obtaining a Section 404 permit.