

ARTICLE II. TREE AND LAND PROVISIONS

Sec. 31-6. General provisions.

(a) *Tree requirements.*

- (1) *Trees:* All property shall provide trees at a ratio of fifteen (15) trees per acre (forty-three thousand five hundred sixty (43,560) square feet), or one (1) tree per two thousand nine hundred four (2,904) square feet of gross lot area. Industrial property shall provide trees at a ratio of fifteen (15) trees per acre (43,560 square feet), or one (1) tree per two thousand nine hundred four (2,904) square feet of net lot area, calculated at sixty (60) percent of the gross lot area or by exclusion of the main enclosed structure ground floor area from the gross lot area, whichever is less.
- (2) *Size:* All trees planted to satisfy the tree standards must be a minimum of three (3) inches in diameter in caliper measured six (6) inches from top of container.
- (3) *Specie:* All trees planted to meet the requirements of this section must be listed on the selected species list. No trees with a maximum mature height of twenty-five (25) feet or greater may be planted within twenty-five (25) feet, measured horizontally, from the nearest overhead utility line.
- (4) *Species diversity:* The following species diversity requirements shall apply to all landscape plans, but shall not be used to limit eligibility for tree credits:

TABLE INSET:

Number of Required Site Trees	Maximum Percentage of Any One Species (Percent)
10--19	50
20--39	35
40--59	25
60+	15

- (5) *Tree selection:* At least fifty (50) percent of the total tree requirement for the property shall be large and medium trees as specified in section 31-15, Selected species list. The remaining trees may be any size tree as specified in section 31-15, Selected species list.

(b) *Land requirements.*

- (1) *Planting area:* All property shall reserve as planting area a minimum of twenty (20) percent of gross lot area.
- (2) Limits of clearing and grading the limits of clearing and grading shall be designated on the approved landscape plan prior to commencement of any construction activity. The limits of clearing and grading shall designate the outermost edge of the area within which the existing topography is to be altered by cutting, filling, and vegetation removal. In evaluating the limits of clearing and grading, the development review committee shall determine that reasonable construction design principles, practices, and installation techniques have been employed to minimize areas subjected to disturbance. The extent of land disturbance shall be minimized, and shall accommodate only the following activities:
 - a. Street construction and necessary slope construction. However, such clearing shall meet the criteria of the city.
 - b. Public service or utility easements and rights-of-way. This shall include areas for utility line installation with any temporary construction easements necessary for such installation and easements for maintenance access. These easements shall not be cleared prior to actual line installation. Temporary construction easements shall be located to minimize soil disturbance and tree removal.
 - c. Building roof coverage area and ancillary structures, such as covered patios and porches, plus up to ten (10) feet on all sides for construction activity.
 - d. Driveways, alleys, walkways, parking lots, and other land area necessary to the installation of the proposed development or use. Other necessary land area may include area for tennis courts, swimming pools, and related structures and uses.
 - e. Area for septic field as required by the utility department. This shall not include area necessary for reserve lines until such time as the reserve lines must be installed.
 - f. Sediment basins. Only the area necessary for the construction of the dam, the area in which sediment will collect, and the area necessary for construction and maintenance of the basin shall be cleared of vegetation. Configuration of the basin shall use natural terrain as much as possible to minimize vegetation removal. Any vegetation that dies as a result of the deposit of sediment and/or debris shall be removed by the property owner.

- g. Detention ponds. Only the area necessary for the construction of the dam and the area necessary for construction and maintenance of the pond shall be cleared of vegetation. Configuration of the pond shall use natural terrain as much as possible to minimize vegetation removal. Any vegetation that dies as a result of the deposition of sediment and/or debris shall be removed by the property owner.
 - h. Other types of construction, or land activity associated with construction, not listed in items a. through g. (above), that are necessary for the reasonable completion of the project.
- (c) *Street trees (reserved section)*. Pending comprehensive plan completion, this section serves as notification that the City of Denton intends to implement street tree requirements in the near future.
- (d) *Tree credits*.
- (1) Preservation of existing trees may be used to receive credit toward meeting the tree standard of fifteen (15) trees per acre, if the trees are healthy and without substantial damage or defect. Tree credits shall be earned in the following increments:

TABLE INSET:

DBH of Existing Tree	Tree Credits
3 to 9 inches	1.0
9+ to 15 inches	1.5
15+ to 21 inches	2.0
21+ to 27 inches	2.5
27+ inches	3.0
Landmark Tree	5.0

- (2) Tree credits may not be earned for preservation of existing trees located on land required to be dedicated for public right-of-way or easement purposes, unless the property owner can demonstrate the ability to protect the credited trees by way of restrictive covenant or other legal instrument considered satisfactory by the city attorney.
- (3) Tree credit protection measures: Tree credits will not be permitted unless temporary tree protection devices are installed at least to the limit of the critical root zone or the drip line, whichever is greater, during construction activity. The following activities shall be prohibited within the limits of the critical root zone or drip line of any tree being preserved for credit:

- a. *Physical damage:* Any physical damage to a tree preserved for credit that is considered to place the survival of the tree in doubt shall be eliminated as a credited tree. Tree topping is prohibited for trees preserved for credit.
 - b. *Equipment cleaning and liquid disposal:* No equipment shall be cleaned or other liquids deposited or allowed to flow overland within the limits of the critical root zone of a protected or monarch tree. This includes paint, oil, solvents, asphalt, concrete, mortar, tar or similar materials.
 - c. *Grade changes:* No grade changes (cut or fill) shall be allowed within the limits of the critical root zone of any protected tree unless adequate construction methods are approved by the director of planning and development.
 - d. *Impervious paving:* No paving with asphalt, concrete or other impervious materials in a manner which may reasonably be expected to kill a tree shall be placed within the limits of the critical root zone of a protected tree, unless otherwise specified within this article.
 - e. *Material storage:* No materials intended for use in construction or waste materials accumulated due to excavation or demolition shall be placed within the limits of the critical root zone of any protected tree.
 - f. *Tree attachments:* No signs, wires, or other attachments, other than those of a protective nature shall be attached to any protected or monarch tree.
 - g. *Vehicular traffic:* No vehicular and/or construction equipment traffic, parking, or storage shall take place within the limits of the critical root zone of any protected tree other than on existing street pavement. This restriction does not apply to single incident access within the critical root zone for purposes of clearing underbrush, establishing the building pad and associated lot grading, vehicular access necessary for routine utility maintenance or emergency restoration of utility service or routine mowing operations.
- (e) *Landmark trees.* Landmark tree nominations will be prepared by the director, during landscape plan review or after the evaluation of nomination proposals submitted to the director. Those species with a minimum diameter of at least seventy-five (75) percent of the listing in the most current publication of the Texas Forest Service *Big Tree Registry* are eligible for landmark tree nomination. If a tree eligible for landmark nomination is so designated by the director, the owner of the tree must either preserve the tree in accordance with section 31-6(d)(1) of this article or provide replacement trees with a combined caliper in inches, measured

six (6) inches above the top of container, equal to one-half (50) percent of the diameter in inches four and one-half (4 1/2) feet above the ground level, of the designated landmark tree that is removed. If a tree is designated as a landmark tree it shall be unlawful for an owner of the tree to fail to preserve the tree or fail to replace the tree within six (6) months of the clearing or grading, as required by this article.

(f) *Residential subdivisions.*

- (1) Residential subdivisions may demonstrate compliance with the fifteen (15) trees per acre tree standard by calculating the average number of trees per acre for the area contained within the entire subdivision.
- (2) If a residential subdivision achieves an average of thirty (30) or more trees per acre by reserving open space to be dedicated to the city, including land required by the city's park dedication ordinance, or to be maintained by a homeowners' association, minimum lot size may be reduced by ten (10) percent in order to realize the maximum density allowed within the zoning district.

(g) *Public property.*

- (1) Construction projects located within public rights-of-way and easements: The area defined by project limit lines will be used to determine tree standard compliance. Trees removed must be replaced in accordance with the table provided in this section. If replacement trees cannot be planted within the project area, they must be planted within areas designated by the director and consistent with city open space plans.

TABLE INSET:

DBH of Existing Tree	Tree Replacement Requirement
6 to 12 inches	1.0
12+ to 24 inches	1.5
24+ to 36 inches	2.0
36+ inches	2.5

(h) *Functional requirements.*

- (1) *View obstructions:* All landscaping, trees and screening devices required by this article shall be constructed, installed and maintained so as not to obstruct the view of motorists between the street and the access drives and parking aisles near the street yard entries and exits, nor shall any landscaping which creates an obstruction or view be located in the radius of any curb return.

- (2) *Traffic barriers:* All planting areas, including critical root zones around trees and those used for parking lot screening and interior landscaping areas, which abut any parking lot or vehicular area shall be protected with curbs, parking blocks or similar barriers sufficient to protect vegetation from vehicular intrusion.
- (3) *Plant and planting quality conformance:* All plant materials, including replacement trees, shall be specified and planted with plants using the standards of the most recently published version of the *American Standards for Nursery Stock*, by the American Association of Nurserymen. All plants shall be clearly tagged by the providing nursery for easy inspection with the botanical name. All landscaping shall be installed according to sound horticultural practices, in a manner designed to encourage quick establishment and healthy growth.
- (4) *Stockpiling:* Topsoil that is removed during construction shall be stored onsite and conserved for later use in required planting areas.

(Ord. No. 98-100, § II, 4-7-98; Ord. No. 98-396, § IV, 11-17-98)

ARTICLE IV. ADMINISTRATION REVIEW AND PERMITTING

Sec. 31-9. Administration, review and permitting.

(a) *Plan submissions.*

- (1) *Tree inventory plan:* After the effective date of this ordinance, no preliminary plat may be approved without the submission and acceptance of a tree inventory plan. The tree inventory plan shall delineate site trees by type, size and species. An inventory map shall delineate tree cover by identifying all stands of trees with similar characteristics, such as specie, and defined as areas which include the outer perimeter of the drip line of individual trees. Notation shall be included indicating the range of height and DBH of trees within the areas, the predominant species within the areas, and the general appearance of the trees with regard to health.
- (2) *Landscape plan:* The owner of any property to which this article applies shall submit a landscape plan in the form and manner specified by the planning and development department before the approval of the final plat. This plan can be combined with the tree inventory plan. The landscape plan shall contain sufficient detail, as specified by the department, to show the following:

- a. The location of all existing or proposed subdivision improvements, buildings and impervious surfaces; residential subdivision landscape plans may substitute limits of clearing and grading designations for individual lots instead of detailed building location and impervious surface information until the time that a plot plan is required;
- b. The limits of clearing and grading proposed for the project;
- c. The location, size, species, and health of all existing trees intended to be used for tree credit purposes, including tree credit calculations and the methods proposed to comply with preservation requirements;
- d. The location, size, and species of all new trees required to meet the tree standard of fifteen (15) trees per acre, including the calculations that show how existing and new trees will comply with the ordinance;
- e. When the perimeter and/or internal landscaping requirements for parking lots apply, the size and location of the parking lot(s), the number and striping of parking spaces, the calculations that show how many trees and shrubs are required, the location of required plantings and planting areas, the illustration of tree canopies as fifty-foot wide radius circles;
- f. When the property is required to provide screening for outdoor storage areas, the location and specification of screening materials;
- g. When the property is required to provide buffer yards, the location and specification of buffer yard materials;
- h. The location of topsoil storage areas;
- i. Identification of any trees eligible for monarch tree nomination; and
- j. Such other information, as specified by the department, as may be reasonably necessary to administer and enforce the provisions of this article.

(3) *Irrigation plan:* The owner of any property to which this article applies shall submit a irrigation plan in the form and manner specified by the planning and development department before the approval of the final plat. The irrigation plan shall contain sufficient detail, as specified by the department, to show the following:

- a. Layout of the irrigation plan.

- b. Irrigation method(s) description with product specifications indicating low precipitation and water conserving heads.
- c. Control box and sensor specifications.
- d. Location of water sources.

(4) *Review and approval of the landscape and irrigation plans:* The planning and development department shall determine the completeness of the submitted landscape and irrigation plans within two (2) working days. The plan will be referred to the development review committee for its review and approval. The committee shall return the plan to the department noting thereon its approval or disapproval. If disapproved, the committee shall specify the reasons why the plan does not comply with the provisions of this article.

(5) *Plot plan:* Before the approval of any building permit application a plot plan must be submitted. A plot plan for residential, multifamily, commercial or industrial use must be consistent with the landscape plan and it must show the limits of grading and clearance for building construction and impervious surface installation. It shall also indicate specific lot drainage patterns, the location of any trees preserved for credit on the approved landscape plan, trees to be removed, protection measures for preserved trees, and new trees to be planted. For projects with detailed site, landscape, and construction documents, the plot plan requirement may be waived where all information has been previously provided.

(b) *Alternative compliance.*

(1) If the platted property is over two (2) acres in size, the applicant may request permission to create an "artificial lot" to satisfy the requirements of this chapter. An artificial lot is intended to provide administrative relief for large sites that will achieve planting areas that exceed substantially more than twenty (20) percent of gross platted lot area after development is completed. The director shall approve the creation of an artificial lot only if the spirit and intent of this chapter will not be violated. If approved by the director, artificial lot lines shall be indicated on the proposed landscape plan and shall contain, at minimum, the total amount of impervious surface coverage, plus twenty (20) percent of the area inside the artificial lot reserved for required planting area.

(2) The area within the artificial lot lines shall provide trees and landscaping in compliance with the requirements of this section, and may not extend beyond the property boundaries of a single platted lot.

- (3) The area outside the artificial lot shall be maintained as planting area with live vegetation determined by the applicant. No trees located outside the artificial lot lines may be used for tree credits.
- (4) The artificial lot lines shall include areas that, in the director's opinion, are highly visible from public rights-of-way or are necessary to accomplish buffering of adjacent properties.
- (5) Alternative landscape plan. Any property owner or developer may elect to submit an alternative landscape plan for city council review and approval that fails to meet the requirements of this section, but in the opinion of the applicant, satisfies the spirit and intent of this section. The planning and zoning commission shall review the alternative plan and submit an advisory opinion to the city council prior to city council action.

(Ord. No. 98-100, § II, 4-7-98; Ord. No. 98-396, § VI, 11-17-98)

Sec. 31-10. Enforcement, penalties, and fees.

- (a) *Bond/cash deposit.* In lieu of installation of the landscape materials prior to occupancy, the applicant may post a bond acceptable to the city, conditioned upon satisfactory installation of the landscaping proposed in the landscape plan.
- (b) *Penalties.* That any person violating any provision of this ordinance shall, upon conviction, be fined a sum not exceeding five hundred dollars (\$500.00). Each day that a provision of this ordinance is violated shall constitute a separate and distinct offense.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-11. Civil remedies.

- (a) Nothing in this chapter shall be construed as a waiver of the city's right to bring a civil action to enforce the provisions of this chapter and to seek remedies as allowed by law, including but not limited to the following:
 - (1) Injunctive relief to prevent specific conduct that violates the ordinance or to require specific conduct that is necessary for compliance with the ordinance.
 - (2) A civil penalty up to one thousand dollars (\$1,000.00) a day when it is shown that the defendant was actually notified of the provisions of the ordinance and after receiving notice committed acts in violation of the ordinance or failed to take action necessary for compliance with the ordinance.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-12. Appeals.

Unless otherwise provided, an action by the city in determining compliance with the terms of this article refers to a determination by the planning and development department or the development review committee (DRC). The developer/owner of land subject to the requirements of this chapter may appeal any determination by the planning and development department or the development review committee under this chapter to the city council for a final decision. The appeal shall be in writing and shall be filed with the planning and zoning commission, which shall make its recommendation to the city council. The city council will not review the appeal of any determination by the planning and development department or the development review committee without first obtaining the recommendation of the planning and zoning commission. No plat or permit shall be approved by the planning and zoning commission which varies the terms of this chapter or which does not comply with the planning and development department or development review committee's determination without final resolution of the appeal by the city council.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-13. Fees.

The city council may adopt a fee or fees, in the amount to be established by ordinance, to administer and enforce the provisions of this chapter.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-14. Conflicting ordinances.

All ordinances or parts of ordinances in force when the provisions of this ordinance become effective which are inconsistent or in conflict with the terms or provisions contained in this ordinance are hereby repealed to the extent of the conflict.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-15. Selected species list.

(a) *Large and medium trees:*

TABLE INSET:

Common Name	Botanical Name	Native	Height & Width
Caddo Maple	<i>Acer barbatum</i> `Caddo'		60' × 40'
Bigtooth Maple	<i>Acer grandidentatum</i>	Native	50' × 30'
Texas Buckeye	<i>Aesculus arguta</i>	Native	30' × 20'
Chittamwood	<i>Bumelia lanuginosa</i>	Native	40' × 30'
Pecan	<i>Carya illinocensis</i>	Native	80' × 60'
Black Hickory	<i>Carya texana</i>		60' × 50'
Deadar Cedar	<i>Cedrus deodara</i>		40' × 30'
American Smoketree	<i>Cotinus obovatus</i>		30' × 20'
Leyland Cypress	<i>Cupressocyparis leylandii</i>		40' × 15'
Arizona Cypress	<i>Cupressus arizonica</i>		35' × 20'
Texas Persimmon	<i>Diospyrus texana</i>	Native	30' × 20'
Common Persimmon	<i>Diospyrus virginiana</i>		30' × 30'
White Ash	<i>Fraxinus americana</i>	Native	60' × 50'
Texas Ash	<i>Fraxinus texensis</i>	Native	50' × 40'
Thornless Honeylocust	<i>Cleditsia triancanthos inermis</i>	Native	80' × 60'
Nogolito	<i>Juglans microcarpa</i>	Native	30' × 20'
Black Walnut	<i>Juglans nigra</i>	Native	80' × 60'
Red Cedar	<i>Juniperus virginiana</i>	Native	40' × 10'
Canaert Juniper	<i>Juniperus virginiana</i> `Canaertii'		30' × 20'
Sweet Gum	<i>Liquidamber styraciflora</i> (cultivars)	Native	60' × 40'
Osage Orange	<i>Maclura pomifera</i> `Park'	Native	50' × 40'
Fruitless White Mulberry	<i>Morus alba</i> `Fruitless'		35' × 40'
Texas Mulberry	<i>Morus rubra</i>	Native	40' × 40'
Black Gum	<i>Nyssa sylvatica</i>	Native	50' × 25'
Afghan Pine	<i>Pinus eldarica</i>		40' × 20'
Austrian Pine	<i>Pinus Nigra</i>		40' × 25'
Chinese Pistache	<i>Pistachia chinesis</i>		40' × 30'
London Plane Tree	<i>Platanus acerifolia</i>		50' × 35'
Sycamore	<i>Platanus occidentalis</i> (cultivars)		70' × 60'
Cottonwood	<i>Populus deltoides</i> (cultivars)		80' × 40'
Flowering Pear	<i>Pyrus calleryana</i> `Aristocrat'		30' × 20'
Sawtooth Oak	<i>Quercus accutissima</i>		60' × 50'
Escarpment Live Oak	<i>Quercus fusiformis</i>	Native	40' × 40'
Lacey Oak	<i>Quercus glaucoides</i>	Native	50' × 45'

Bur Oak	Quercus macrocarpa	Native	60' × 40'
Chinquapin Oak	Quercus muehlenbergii	Native	60' × 40'
Water Oak	Quercus nigra	Native	50' × 40'
Willow Oak	Quercus phellos		60' × 30'
Shumard Oak	Quercus shumardii	Native	70' × 50'
Post Oak	Quercus stellata	Native	60' × 45'
Texas Red Oak	Quercus texana	Native	30' × 30'
Coastal Live Oak	Quercus virginiana (cultivars)	Native	50' × 50'
Weeping Willow	Salix babylonica		40' × 30'
Western Soapberry	Sapindus saponaris v. "Drummondii"	Native	30' × 20'
Bald Cypress	Taxodium distichum		60' × 30'
Little-leaf Linden	Tilia cordata		60' × 40'
Winged Elm	Ulmus alata	Native	35' × 40'
American Elm	Ulmus americana	Native	70' × 70'
Cedar Elm	Ulmus crassifolia	Native	50' × 40'
Lacebark Elm	Ulmus parvifolia		50' × 35'
Slippery Elm	Ulmus rubra	Native	70' × 60'

(b) *Accent/small trees and large shrubs:*

TABLE INSET:

Common Name	Botanical Name	Native	Height & Width
Roemer Acacia	Acacia roemeriana		15' × 15'
Wright Acacia	Acacia wrightii	Native	15' × 15'
Japanese Maple	Acer palmatum (cultivars)		15' × 10'
Scarlet Buckeye	Aesculus pavia	Native	25' × 20'
Texas Madrone	Arbutus xalapensis	Native	25' × 20'
Lemon Bottlebrush	Callistemon citrinus		15' × 16'
Weeping Bottlebrush	Callistemon viminalis		20' × 15'
Netleaf Hackberry	Celtis reticulata	Native	25' × 25'
Little-leaf Palo Verde	Cercidium microphyllum		12' × 15'
Redbud	Cercis canadensis (cultivars)	Native	25' × 20'
Oklahoma Redbud	Cercis canadensis texensis 'Oklahoma'	Native	20' × 15'
Forest Pansy Redbud	Cercis canadensis 'Forest Pansy'		20' × 15'
Texas Redbud	Cercis canadensis texensis	Native	25' × 20'

Desert Willow	Chilopsis linearis	Native	20' × 15'
Texas Persimmon	Diospyros texana	Native	25' × 20'
Kidneywood	Eysenhardtia polystachya	Native	20' × 12'
Fragrant Ash	Fraxinus cuspidata	Native	15' × 10'
Nellie R. Stevens Holly	Ilex aquifolium `Nellie R. Stevens'		20' × 15'
Burford Holly	Ilex cornuta `Burfordi'		20' × 15'
Possumhaw Holly	Ilex decidua	Native	15' × 10'
Yaupon Holly	Ilex vomitoria (cultivars)	Native	Varies
Weeping Yaupon	Ilex vomitoria `Pendula'		12' × 8'
Foster Holly #2	Ilex x attenuata `Fosteri' #2		25' × 15'
Ashe Juniper	Juniperus ashei	Native	25' × 15'
Rocky Mountain Juniper	Juniperus scopulorum		30' × 15'
Goldenrain Tree	Koelreuteria paniculata		25' × 15'
Crape Myrtle	Lagerstroemia indica (cultivars)		15' × 10'
Flowering Crabapple	Malus hydrida (cultivars)		20' × 20'
Southern Wax Myrtle	Myrica cerifera	Native	15' × 10'
Red Tip Photinia	Photinia fraseri		20' × 15'
Chinese Photinia	Photinia serrulata		20' × 15'
Japanese Black Pine	Pinus thunbergii		30' × 30'
Texas Pistache	Pistacia chinensis	Native	20' × 15'
Carolina Cherry Laurel	Prunus caroliniana		25' × 15'
Mexican Plum	Prunus mexicana	Native	25' × 25'
Flatwoods Plum	Prunus umbellata		15' × 10'
Carolina Buckthorn	Rhamnus caroliniana	Native	20' × 15'
Smooth Sumac	Rhus glabra	Native	15' × 10'
Flame-leaf Sumac	Rhus lanceolata	Native	20' × 15'
Eves Necklace Tree	Sophora affinis	Native	20' × 15'
Texas Mountain Laurel	Sophora secundiflora		15' × 10'
Mexican Buckeye	Ungnadia speciosa	Native	20' × 20'
Rusty Blackhaw	Viburnum rufidulum	Native	25' × 20'
Vitex	Vitex agnuscastus	Native	15' × 20'

(c) *Shrubs:*

TABLE INSET:

Common Name	Botanical Name	Height & Width
Glossy Abelia	Abelia grandiflora (cultivars)	6' × 5'

Edward Goucher Abelia	Abelia grandiflora `Edward Goucher'	5' × 5'
Prostrate abelia	Abelia grandiflora `Prostrata'	2' × 2'
Japanese Acuba	Acuba japonica	4' × 4'
Purpleleaf Barberry	Berberis thunbergii `Atropurpurea'	5' × 4'
Pygmy Barberry	Berberis thunbergii `Crimson Pygmy'	2' × 3'
Crimson Pygmy Barberry	Berberis thunbergii `Crimson Pygmy'	2' × 1.5'
Japanese Boxwood	Buxus microphylla japonica (cultivars)	10' × 10'
Beautyberry	Callicarpa americana	10' × 6'
Buttonbrush	Cephalanthus occidentalis	8' × 6'
Dwarf Flowering Quince	Chaenomeles japonica `Texas Scarlet'	3' × 3'
Flowering Quince	Chaenomeles speciosa	7' × 5'
Roughleaf Dogwood	Cornus drummondii	6' × 5'
Pampas Grass	Cortaderia selloana	10' × 7'
Cotoneaster	Cotoneaster (cultivars)	Varies
Ebbing's Silverberry	Eleagnus x ebbengei	10' × 5'
Japanese Aralia	Fatsia Japonica	10' × 10'
Forsythia	Forsythia x intermedia	6' × 6'
Hypericum	Hypericum henryii	3' × 3'
Needlepoint Holly	Ilex cornuta	5' × 5'
Dwarf Burford Holly	Ilex cornuta `Burfordi Nana'	7' × 4'
Carissa Holly	Ilex cornuta `Carissa'	4' × 5'
Dwarf Horned Holly	Ilex cornuta `Rotunda'	4' × 4'
Wilson Holly	Ilex cornuta `Wilsonii'	5' × 5'
Dwarf Japanese Holly	Ilex crenata `Compacta'	4' × 4'
Heller Japanese Holly	Ilex crenata `Helleri'	3' × 4'
Dwarf Yaupon Holly	Ilex vomitoria `Nana'	4' × 4'
Dwarf Pfitzer Juniper	Juniperus chinensis `Pfitzerana Compacta'	2' × 6'
Pfitzer Juniper	Juniperus chinensis `Pfitzerana'	5' × 10'
Blue Vase Juniper	Juniperus chinensis `Blue Vase'	5' × 4'
Shore Juniper	Juniperus conferta	2' × 4'
Japanese Garden Juniper	Juniperus procumbens	2' × 6'
Dwarf Crape Myrtle	Lagerstroemia indica (cultivars)	6' × 4'
Prostrate Crape Myrtle	Lagerstroemia indica (cultivars)	3' × 3'
Lantana	Lantana (cultivars)	Varies
Texas Sage	Leucophyllum frutescens (cultivars)	Varies
Variegated Chinese Privet	Ligustrum sinense `Variegata'	7' × 7'
Giant Liriope	Liriope gigantea	3' × 3'

White Honeysuckle	Lonicera albiflora	4' × 4'
Leatherleaf Mahonia	Mahonia bealei	4' × 3'
Agarita	Mahonia trifoliata	5' × 2.5'
Nandina	Nandina domestica (cultivars)	Varies
Compact Nandina	Nandina domestica `Compacta'	5' × 3'
Dwarf Nandina	Nandina domestica `Harbour Dwarf'	3' × 3'
Dwarf Pomegranate	Punica granatum `Nana'	5' × 4'
Firethorn	Pyracantha (cultivars)	Varies
Fragrant Sumac	Rhus aromatica	8' × 6'
Rosemary	Rosmarinus officinalis `Tuscan Blue'	3' × 4'
Lavender Cotton	Santolina (cultivars)	2' × 3'
Bridalwreath Spirea	Spirea prunifolia	7' × 5'
Vanhoutte Spirea	Spirea x vanhouttei	6' × 5'
Coralberry	Symphoricarpos orbiculatus	2' × 2'
Wood Fern	Thelypteris kunthii	2' × 2'

(d) *Groundcovers/bedding plants:*

TABLE INSET:

Common Name	Botanical Name
Cast Iron Plant	Aspidistra elatior
Horse Herb	Calyptocarpus vialis
Trumpet Creeper	Campsis radicans
Dalla Greggii	Dalea greggii
Wintercreeper	Euonymus fortunei
Shore Juniper	Juniperus conferta
Creeping Juniper	Juniperus horizontalis (cultivars)
Japanese Garden Juniper	Juniperus procumbens (cultivars)
Trailing Lantana	Lantana montevidensis
Lilyturf	Liriope (cultivars)
Mondo Grass	Ophiopogon japonicus (cultivars)
Virginia Creeper	Parthenocissus quinquefolia
Coral Berry	Symphoricarpos orbiculatus
Asiatic Jasmine	Trachelospermum asiaticum
Periwinkle	Vinca major and minor

(e) *Vines:*

TABLE INSET:

Common Name	Botanical Name
Coral Vine	Antigonon leptopus
Cross Vine	Bignonia capreolata
Trumpet Vine	Campsis radicans
Carolina Snailseed Vine	Cocculus carolinus
Carolina Jessamine	Gelsemium sempervirens
Ivy	Hedera (cultivars)
Hall's Honeysuckle	Lonicera japonica `Halliana'
Coral Honeysuckle	Lonicera sempervirens
Boston Ivy	Parthenocissus tricuspidata
Champanel Grape	Vitid chaminii `Champanel'
Grape Vine	Vitis vinifera
Janpanese Wisteria	Wisteria floribunda
Chinese Wisteria	Wisteria sinensis

(f) *Ornamental grasses:*

TABLE INSET:

Common Name	Botanical Name
Big Bluestem	Amdropogon gerardii
Silver Bluestem	Bothriochloa saccharoides
Reed Grass	Calamagrostis spp.
Inland Sea Oats	Chasmanthium latifolium
Pampas Grass	Cortaderia selloana
Lemon Grass	Cymbopogon citratus
Sugarcane Plumegrass	Erianthus giganteus
Eulalia	Misanthus spp.
Maiden Grass	Misanthus sinensis `Gracillimus'
Zebra Grass	Miscanthus sinensis `Zebrinus'
Variegated Japanese Silver Grass	Miscanthus sinensis `Variegatus'
Purple Muhly	Muhlenbergia filipes
Lindheimer's Muhly	Muhlenbergia lindheimeri
Seep Muhly	Muhlenbergia reverchoni
Dwarf Fountaingrass	Pennisetum alopecuroides `Hamelin'
Purple Fountaingrass	Pennisetum setaceum `Rubrum'

Fountaingrass	Pennisetum spp.
Black Bamboo	Phyllostachys nigra
Little Bluestem	Schizachyrium scoparium

(g) *Lawn grasses:*

TABLE INSET:

Common Name	Botanical Name
Buffalo Grass	Buchloe dactyloides
Bermuda Grass	Cynodon dactylon
Tall Fescue	Festuca spp.
St. Augustine Grass	Stenotaphrum secundatum spp.
Zoysia Grass	Zoysia spp.

(h) *Perennials:*

TABLE INSET:

Common Name	Botanical Name
Acanthus	Acanthus mollis
Hollyhock	Alcea rosea
Lily-of-the-Nile	Agapanthus spp.
Yarrow	Achillea spp.
Bugleweed	Ajuga spp.
Amaranthus	Amaranthus tricolor
Bluestar	Amsonia spp.
Bugloss	Anchusa spp.
Texas Gold Columbine	Aquilegia chrysantha v. 'Hinkleyana'
Wormwood	Artemisia spp.
Milkweed	Asclepias spp.
Wild Indigo	Baptisia spp.
Brunnera	Brunnera spp.
Caladium (annual)	Caladium (cultivars)
Canna	Canna x generalis
Periwinkle (annual)	Cartharanthus roseus
Shasta Daisy	Chrysanthemum maximum
Colewort	Crambe cordifolia

Crocus	Crocus spp.
Mexican Heather (annual)	Cuphea hyssopifolia
Bleeding Heart	Dicentra spp.
Coneflower	Echinacea purpurea
Barrenwort	Epimedium spp.
Texas Blueball	Eustoma grandiflorum
Daylily	Hemerocalis spp.
Rose Mallow	Hibiscus moscheutos
Hosta	Hosta spp.
Candytuft	Iberis sempervirens
Iris	Iris x hybrids
Lantana	Lantana spp.
Lavender	Lavandula spp.
Sea Lavender	Limonium spp.
Alyssum	Lobularia maritima
Lupine	Lupinus spp.
Loosestrife	Lysimachia spp.
Turk's Cap	Malvaviscus arboreus v. 'Drumondii'
Blackfoot Daisy	Melampodium leucanthum
Bee Balm	Monarda didyma
Grape Hyacinth	Muscari spp.
Daffodil	Narcissus spp.
Catmint	Nepeta spp.
Oxalis (Wood Sorrel)	Oxalis crassipes
Rock Rose	Pavonia lasiopetala
Russian Sage	Perovskia atripicifolia
Thift	Phlox subulata
Obedient Plant	Physostegia virginiana
Soloman's Seal	Polygonatum spp.
Knotweed	Polygonum spp.
Moss Rose (annual)	Portulaca grandiflora
Cinquefoil	Potentilla spp.
Lungwort	Pulmonaria spp.
Gloriosa Daisy	Rudbeckia spp.
Mexican Petunia	Ruellia spp.
Sage	Salvia spp.
Lavender Cotton	Santolina spp.

Sedum	Sedum spp.
Dusty Miller	Senecio cineraria
Goldenrod	Solidago spp.
Spiderwort	Tradescarita occidentalis
Verbena	Verbena spp.
Speedwell	Veronica spp.

(Ord. No. 98-100, § II, 4-7-98; Ord. No. 98-396, § VII, 11-17-98)

Sec. 31-2. Statement of purpose.

The intent of this article is to promote the immediate and long-term public health, safety, economic stability and general welfare by establishing and managing the city's urban tree canopy coverage. This article is intended to promote the following general purposes:

- (1) Preservation, protection, and enhancement of the ecological and aesthetic attributes of the city.
- (2) Ecological stabilization through urban forest management that contributes to the processes of air purification, oxygen regeneration, ground water recharge, stormwater runoff retardation; and promotes energy efficiency and water conservation, thereby abating noise, heat and glare.
- (3) Protection, preservation and advancement of the urban forest's appearance, character and value that includes all properties within the community, and that contributes to a strong sense of neighborhood, community, and quality of life.
- (4) Protection and preservation of native and specimen vegetative species, their ecosystems and natural habitats and preventing damage to and unnecessary removal of vegetation during the land development and construction processes.
- (5) Acknowledgement that trees and landscaping add value to property, protect public and private investment to the general benefit of the city and its residents.
- (6) More specifically, this article is intended to:
 - a. Protect water resources, floodplains, environmental quality, and the natural and manmade physical and visual quality of the city.
 - b. Mitigate the effects of impervious surface land coverage by structures and paving that tend to increase ambient air temperature and generate greater water runoff causing erosion, flooding, and water pollution.

- c. Prevent clear-cutting and mass grading of land by encouraging the use of natural terrain for building sites, and by providing cluster development incentives.
- d. Promote native plant species preservation and replenishment, and encourage the use of drought tolerant and low water usage vegetation.
- e. Provide incentives for tree preservation.
- f. Protect and provide wildlife habitats.
- g. Require landscaping and screening to promote land use compatibility and improved aesthetic quality.
- h. Promote soil conservation by minimizing natural terrain disturbances, thereby reducing sedimentation, and air and surface water pollution.

(Ord. No. 98-100, § II, 4-7-98)

Sec. 31-3. Definitions.

[The following words, terms and phrases, as used in this chapter, shall have the meanings respectively ascribed to them in this section, unless the context clearly indicates otherwise:]

Clearing means an intentional act to cut down, remove all or a substantial part of, or damage a tree or other vegetation that will cause the tree or other vegetation to decline and/or die. Clearing is defined to include, but not be limited to, chemical, physical, compaction, or grading damage. Clear-cutting is a clearing activity conducted over an entire lot,

Critical root zone means a circular region measured outward from a tree trunk representing the essential area of the roots that must be maintained or protected for the tree's survival. A tree's critical root zone is measured as one (1) foot of radial distance outward from the trunk for every inch of tree DBH, and may be no less than a radius of eight (8) feet.

DBH means diameter-at-breast-height (DBH) is the tree trunk diameter measured in inches at a height of four and one-half (4 1/2) feet above ground level. If a tree splits into multiple trunks below the four and one-half (4 1/2) feet level, DBH will be defined as the sum of each individual trunk measured at four and one-half (4 1/2) feet above ground level, or the single trunk at its most narrow dimension, whichever is greater.

Director means the City of Denton Director of Planning and Development, or the director's designee.

Drip line means the area beneath the canopy of a tree defined by a vertical line extending from the outermost edges of the tree branches to the ground.

Erosion means the detachment and movement of soil or rock fragments, or the wearing away of the land surface by water, wind, ice, or gravity.

Grading means the mechanical or physical act of disturbing, moving, removing, transferring, or redistributing soil or earthen surfaces.

Gross lot area means an area under public or private property ownership, whose lot lines are described by plat or deed.

Ground cover means low growing plants, vines, or grasses that form dense, extensive growth, and have a positive effect against soil erosion and soil moisture loss.

Impervious surface means a surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water.

Industrial property means properties developed with land uses described in the "1987 Standard Industrial - Classification Manual," published by the executive office of the president, office of management and budget, within the following categories: Manufacturing (Division D) or Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation (Division E, Major Group 42, Industry Group No. 423).

Landmark tree means a tree that has been determined to be of unique community value because of its size, specie, age, form, historical significance, or other unique characteristics.

Limits of clearing and grading means the boundaries of that area of land identified in a landscape plan to be subject to soil disturbance or cleared of trees and other vegetation in conjunction with a proposed development or land use.

Live plant materials means "live" plant material, including grasses, annuals, perennials, bulbs, groundcover, shrubs, and trees are botanical plants that are nourished through the processes of air, water, and soil nutrients. Plant materials such as, plastic, fibrous, silk or other nonliving materials are not considered "live" plant materials.

Outdoor storage area means any area that contains trash collection areas or dumpster refuse containers; outdoor loading and unloading spaces, docks or outdoor shipping and receiving areas; outdoor storage of bulk materials and/or parts; or areas regularly used for outdoor repair, outdoor storage areas of service stations, motor vehicle dealers, or inspection stations. Temporary construction and related activities are excluded from this definition.

Permanent tree protection devices means structural measures, such as retaining walls or aeration devices, that are designed to protect the tree and its root systems throughout its lifetime.

Planting area means an outdoor area, the surface of which may not be covered by impervious surface materials such as asphalt or concrete, nor by structures, and devoted entirely to the planting or construction and maintenance of trees, shrubs, groundcovers, fences, walls, and/or earthen berms.

A temporary tree protection device means physical barriers, at least four (4) feet in height, installed prior to construction for the purpose of preventing damage to trees. Such devices include snow fencing, chain link fence, barbed wire fence, vinyl construction fencing or other similar temporary barrier, may be no less than four (4) feet in height, and no intrusive to the tree critical root zone.

Tree topping means the severe cutting back of limbs to stubs larger than three inches in diameter within the tree's crown to such a degree that removal of the top canopy disfigures and invites probable disease to the tree.

Vegetation means all plant life; however, for purposes of this chapter shall be restricted to mean trees, shrubs, ground cover, and vines with the exception of state and federally protected or endangered vegetative species which in all cases shall be preserved.

Vehicular surface area means any outdoor off-street area used to store or drive motor vehicles that do not contain defined off-street parking spaces. Paved areas used for drive-through windows, parking lot access lanes, or gas station pump lanes are considered to be vehicular surface areas.

(Ord. No. 98-100, § II, 4-7-98; Ord. No. 98-396, § I, 11-17-98)

Sec. 31-7. Specific landscape area requirements.

(a) *Parking lot screening and landscaping.*

- (1) *Perimeter screening:* Any parking lot or portion thereof that is visible from the public right of way and contains ten (10) parking spaces or more shall provide perimeter screening. The perimeter of each parking lot, excluding driveways, which fronts upon or is adjacent to a public street other than a public alley shall be provided with shrub screening with a minimum mature height of thirty-six (36) inches and installation height of eighteen (18) inches or greater, and spaced no more than twenty-four (24) inches apart, edge to edge. Alternative shrub spacing may be used, with the approval of the development review committee, when it can be shown that the selected shrub species growth pattern differs significantly from the spacing requirements of this ordinance. The use of berms and planter walls will be allowed to

contribute to installation and mature height requirements. The slope of any earthen berm shall not exceed one (1) foot of height for each three (3) feet in width.

- (2) *Interior landscaping:* Any parking lot or portion thereof which is constructed and contains forty (40) parking spaces or more shall provide permanently landscaped areas consisting of islands, peninsulas, medians or adjacent planting areas. One (1) canopy tree shall be provided for every fifteen (15) parking spaces, and one (1) shrub will be required for every five (5) parking spaces. At least fifty (50) square feet of planting area shall be provided for each required tree, and no parking space shall be located more than fifty (50) feet from the trunk of a tree. All interior landscaped areas shall be covered by trees, shrubs, or ground cover.
 - (3) *Compliance with tree and land requirements:* The trees or planting areas used to comply with the parking lot screening and landscaping requirements contained in this section may also be used to demonstrate compliance with the fifteen (15) trees per acre standard and the twenty (20) percent planting area lot requirements contained in this chapter.
 - (4) *Distribution of landscaped area:* The required landscaped areas for parking lots shall be more or less evenly distributed throughout the parking lot, although adjustments may be approved by the department, where the shape or size of the parking lot, the location of existing trees or other natural constraints reasonably prevent such distribution.
 - (5) *Vehicular surface areas:* Vehicular surface areas (VSA) must comply with the requirements of this section. Perimeter screening is required as indicated in section 31-7(a)(1). Interior landscaping requirements shall be met by providing one (1) tree per four thousand five hundred (4,500) square feet of VSA, and one (1) shrub per one thousand five hundred (1,500) square feet of VSA. Tree canopy cover shall be evenly distributed throughout the VSA.
- (b) *Outdoor storage area screening.*
- (1) Any outdoor storage area, or portion thereof, must be screened from public rights-of-way using live evergreen screening plants, six (6) feet in height at installation, spaced no more than eighteen (18) inches apart, edge to edge.
 - (2) A fence or wall may also be used for outdoor storage area screening, provided it is at least six (6) feet tall, opaque, and of masonry, stone, or wooden material, or of the same material as that of the principal building, Dumpster enclosure openings may not face public rights-of-way unless they are gaited.
- (c) *Buffer yards.*

- (1) Buffer yards shall be required under the following conditions:
 - a. Multifamily uses shall buffer when adjacent to single-family or attached housing uses.
 - b. Commercial uses shall buffer when adjacent to single-family, attached housing, multifamily, and lesser commercial uses.
 - c. Industrial uses shall buffer when adjacent to any use, including lesser industrial uses.
- (2) Plant materials, walls, or fences may be used within required yards, as specified in section 35-91 of the City Code, to buffer adjacent land uses. Trees or plants used in required yards may be used to demonstrate compliance with other sections in this article.

(Ord. No. 98-100, § II, 4-7-98)