

Chapter 48 LANDSCAPING*

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Sec. 48-1. Purposes.

The purposes of this chapter are to:

- (1) Preserve, protect and enhance the ecological and aesthetic qualities of the City;
- (2) Improve the quality of life for residential and corporate citizens;
- (3) Improve the visual appearance of the city;
- (4) Protect and increase property values there by encouraging new development and re-development within the city;
- (5) Promote quality development and protect the city from uncontrolled development;
- (6) Protect residential land use from commercial and industrial land uses;

- (7) Allow for flexibility and encourage innovation and variety in landscape design within the city; and
- (8) Encourage the preservation of existing trees, promote the use of Texas native plant species, encourage the use of perennial color and encourage water conservation principles.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-2. Definitions.

The definitions used in chapter 90 of this Code shall apply to this chapter, except to the extent that a different definition is provided herein. The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Abut means to share a common boundary line or point.

Adjacent means to share a common boundary line or point or to be separated only by a public easement, right of way, alley or street of no more than 40 feet in width.

Annual plantings means bedding plants that bloom and flower with intense color, and which are intended to be changed out a minimum of twice a year based on seasonal requirements.

Base line square footage requirement means the amount of square footage of required landscape set back area based on the total linear footage of street right-of-way multiplied by the required depth of 30 feet.

Berm means an earth form mound with a gently sloping side that does not exceed one foot of elevation rise to three feet of horizontal distance.

Buffer yard means a zone of green space intended to provide a measure of separation between uses.

Caliper means the average diameter measurement of the trunk of a tree. Caliper is to be measured at six inches above grade when a caliper of four inches or smaller is required, at 12 inches above grade when a caliper between four inches and 12 inches is required, and measured at full breast height (4 1/2 feet) when a caliper larger than 12 inches is required.

Critical root zone means the area of undisturbed natural soil around a tree defined by a concentric circle with a radius equal to the distance from the trunk to the outermost portion of the drip line.

Colored concrete means concrete that has been cast in place with a pre-cure or post-cure color agent added to form a permanent pigment hue on all exposed surfaces.

Curb means a continuous vertical element with a minimum of five inches in total height above the surface of a street or roadway abutting the property, structurally capable of stopping a vehicle's wheel.

Decorative concrete paver's means unitized pre-cast colored concrete unit intended to interlock to form a continuous paving surface capable of supporting motor vehicles.

Development means the physical alteration of land by humans. This includes: subdivision of land; construction or alteration of structures, streets, walkways, utilities and other facilities; installation of septic systems; grading; deposit of refuse, debris, or fill materials; and clearing of natural vegetation cover (with the exception of agriculture activities). Development does not include routine repair and maintenance activities.

Drip line means a vertical line run from the outermost portion of a tree and extending to the ground forming a circular zone.

Drip irrigation means a system of emitters designed to deliver irrigation water to the root zone of plant material without broadcasting over the top of the plant material.

Existing tree means a tree that exists on a development site prior to the construction of proposed improvements.

Expansion means any construction activity that results in an increase in the floor or roof area of the structures on a property.

Grass Crete paver's means unitized or cast-in-place paving systems of open paving capable of supporting the weight of a vehicle and allowing vegetation to grow and thrive on a minimum of 50 percent of the total surface area.

Landscape administrator means an individual or committee designated by the City Council of Richland Hills, Texas charged with administering this chapter.

Masonry shall have that meaning set forth in chapter 90 of this Code, provided, however, that when used in this chapter in regard to screening walls, engineered decorative concrete panel construction shall also be permitted.

Native plant material means plant materials as listed in the current issue of the Texas Native Tree and Plant Directory produced by the Texas Department of Agriculture.

New development means any development on land that does not then have any useable buildings in place upon it, or construction on the land of buildings and structures that are intended to be used as the primary buildings and structures on the land.

Parkway means that portion of the public right-of-way lying between the edge of the pavement or curb and the private property line.

Patterned concrete means cast in place concrete paving that has a decorative texture or pattern imprinted prior to the initial set of the concrete slurry.

Preserved tree means a tree that is existing on a site prior to development and remaining on site after the development is complete.

Private drive means a privately owned driveway designed for vehicular access to a single-tenant or single-user property, whether industrial, commercial or residential.

Private street means a privately owned driveway or street designed for vehicular access to a multi-tenant or multi-user property, whether industrial, commercial or residential.

Re-development means any activity that results in an increase of 25 percent or more in the total square footage of the structures on the property, whether by expansion of existing structures or construction of new structures, and regardless of whether such increase occurs in different stages or phases.

ROW means right-of-way.

Screen means an opaque form capable of preventing visibility beyond.

Screening hedge means an evergreen planting mass of living vegetation with sufficient density to prevent visibility through or beyond the hedge.

Solid screening fence means a sound structural system of decorative masonry design acceptable to the landscape administrator and complying with all city codes, including any building and zoning codes.

Turf means a continuous solid dense planting of grassy vegetation suitable for supporting infrequent pedestrian access without damage.

(Ord. No. 957-03, § 5, 5-13-2003; Ord. No. 959-03, § 1, 6-10-2003)

Sec. 48-3. Applicability of chapter to zoning districts.

This chapter shall apply in its entirety to both new development and re-development in all zoning districts within the city of Richland Hills with the exception of I-1 Light Industrial, I-2 Heavy Industrial, R-1L, single-family residential large lot; R-1, single family residential; and PUD, planned unit development districts. The provisions of subsection 48-4(c), establishing certain requirements for buffer yards, including landscaping and

screening fences, shall also apply in I-1 Light Industrial and I-2 Heavy Industrial zoning districts.

(Ord. No. 957-03, § 5, 5-13-2003; Ord. No. 958-03, § 1, 6-10-2003)

Sec. 48-4. Standard landscape requirements.

- (a) *Landscape setback requirements.* A landscape setback shall be provided along all property lines that abut a public ROW, which setback shall be a minimum depth of 30 feet, provided that such minimum may be reduced as provided in section 48-6 based upon application of the "base line square footage requirement". Regardless of the application of the provisions of section 48-6, however, under no circumstances may the minimum amount of required landscape setback be reduced below a ten feet minimum depth.
- (1) Plantings shall be provided within this setback based on the total linear footage of ROW. Layout and spacing standards for such plantings are provided in section 48-5.
 - (2) Paving within the setback is prohibited except for drive entrance approaches, which approaches shall be perpendicular to the property line.
 - (3) Required plantings shall meet the following minimum requirements:
 - a. A minimum of one tree of a minimum caliper size of three inches shall be planted per each 50 linear feet of ROW frontage or portion thereof.
 - b. A minimum of ten shrubs of a minimum size of five-gallon shall be planted per 50 linear feet of ROW frontage or portion thereof.
- (b) *Parking lot landscape requirements.* On any property containing 20 parking spaces or more, a minimum of one island shall be provided for each 20 parking spaces or portion thereof. Such islands shall meet all of the following criteria:
- (1) All required planting islands shall be a minimum of 150 square feet of contiguous area measured from back of curb to back of curb;
 - (2) All required planting islands shall be protected from vehicular intrusion by means of a permanently installed concrete curbing; and
 - (3) Each required parking lot island shall include a minimum of one three-inch caliper tree and 100 percent coverage of living plant material composed of any combination of shrubs, ground cover, perennials, annuals or turf.
- (c) *Buffer yards.*

- (1) *When a buffer yard is required.* A buffer yard shall be provided on property that abuts property in a different zoning district to the extent, if any, such is required as provided in the table below:

Buffer yard Table #1

TABLE INSET:

		Zoning of Adjacent Property			
		I	C	MF	R
I	None	A	B	C	
C	None	None	A	B	
MF	None	A	None	A	
R	None	None	None	None	

The letter designation in Table #1 "I" includes all Industrial zoning districts as defined in chapter 90 (currently I-1 Light Industrial and I-2 Heavy Industrial), the letter designation in Table #1 "C" includes all Commercial zoning districts as defined in chapter 90 (currently C-1 Restricted Commercial and C-2 General Commercial), the letter designation in Table #1 "MF" includes all multi-family residential districts as defined in chapter 90 (currently R-3 Multi-Family Residential Low Density and R-4 Multi-Family Residential High Density), and the letter designation in Table #1 "R" includes all single-family and two-family residential zoning districts as defined in chapter 90 (currently R-1L Single Family Residential Large Lot, R-1 Single Family Residential, R-2 Two-Family Residential, and MH Manufactured Home). No buffer yards are required for property abutting PUD zoning districts, and PUD zoning districts are not required to provide buffer yards unless and to the extent provided in the ordinance enacting and approving that particular PUD. The requirements for a buffer yard as provided herein are in addition to, but do not supersede, the requirements for erection of a screening fence provided in chapter 90. It is the intent of this section and chapter 90 that the most stringent requirement apply.

- (2) *Specific buffer yard requirements.*
- a. All required buffer yards designated as "A" in Table #1 shall have a minimum depth of ten feet, and shall have planted in it one tree of three-inch or greater caliper per 300 square feet of buffer yard, or portion thereof.
 - b. All required buffer yards designated as "B" in Table #1 shall have a minimum depth of 20 feet, shall have planted in it one tree of three-inch or greater caliper per 300 square feet of buffer yard, or portion thereof, and shall contain a solid screening fence of six feet in height on the subject property along the entire length of the buffer yard (provided such fence shall not extend into any visibility triangle required by this chapter),

and shall be located as close to the property line as feasible, provided that such screening fence shall be located outside of any public easement or right of way, so as to not interfere with the installation or maintenance of any public utility line, roadway, service or drainage way located within or to be located within such public easement or right of way.

- c. All required buffer yards designated as "C" in Table #1 shall have a minimum depth of 30 feet, have planted in it one tree of three-inch or greater caliper per 300 square feet of buffer yard, or portion thereof, and shall contain a solid screening fence of six feet in height and a screening hedge six feet in height, said fence and hedge to be located on the subject property along the entire length of the buffer yard (provided such fence and hedge shall not extend into any visibility triangle required by this chapter), and shall be located as close to the property line as feasible, provided that such screening fence shall be located outside of any public easement or right of way, so as to not interfere with the installation or maintenance of any public utility line, roadway, service or drainage way located within or to be located within such public easement or right of way. The hedge required herein shall be located inside of the fence, so as to allow the owner of the subject property easier access for maintenance of said hedge.
- (3) *General buffer yard requirements.* In addition to the requirements stated in subsection 48-4(c)(2), each required buffer yard shall also meet the following minimum standards:
- a. Buffer yards shall be located along the entire length of the property line;
 - b. All required plantings shall be located totally within the required buffer yard;
 - c. Buffer yard areas and plantings may not be reduced by any alternate landscape requirement items except for native tree and shrub planting selections; and
- (4) *Requirements for buffer yards may not be applied to other requirements.* Required buffer yard plantings are in addition to all other requirements of this chapter. If a property is required to have more than one buffer yard, plantings used to meet the requirements of one buffer yard may be counted towards the requirements of any other required buffer yards.
- (d) *Screening standards for waste receptacles and loading docks.*

- (1) *Dumpster/waste receptacle screening requirements.* Each refuse facility shall be completely screened from view of public streets and adjacent non-industrial zoned properties by:
- a. A solid screening fence required to be erected as part of a buffer yard required by this chapter; or
 - b. A solid screening fence surrounding such refuse facility on three sides by masonry walls not less than the height of the bin or container. The opening shall be situated so that the container is not visible from adjacent properties or public streets unless the opening is equipped with an opaque gate. Gates must have tie-backs to secure in the open position. If opaque gates are required, they shall remain closed except for brief times of required access to or servicing of the receptacle or dumpster.
 - c. Applicability to existing development. New refuse facilities placed on existing development shall be screened in accordance with this section.

- (2) *Loading docks, truck berths and storage areas.* All storage areas and loading docks not screened by an intervening building shall be screened from view from any public street ROW. In addition, storage and loading areas must be screened from view from any abutting property when that property requires a transitional buffer as identified in Table #1 of section 48-4. Screening shall be of sufficient length to screen the maximum size trailer which can be accommodated on the site. Screening shall be accomplished by an opaque screen consisting of one or a combination of the following:

- a. Freestanding walls, wing walls or solid screening fences;
- b. Earthen berms in conjunction with trees and other landscaping; or
- c. A screening hedge.

Screening shall be a minimum height of eight feet to screen truck berths, loading docks, areas designated for permanent parking or storage of heavy vehicles and equipment or materials. If a screening hedge is utilized, it must be of sufficient size and height as to be opaque and eight feet in height within 18 months of planting.

- (e) *Species diversity requirements.* No single species of tree shall comprise more than 50 percent of the required plantings of trees, and no single species of shrub shall comprise more than 50 percent of the required plantings of shrubs.
- (f) *Turf and irrigation of the parkway.* The owner of property subject to this chapter shall provide and install, turf grass and automated irrigation for 100 percent of the

area between the property line and the back of the curb of all public roads that abut the property.

- (g) *Maintenance requirements.* Landscaping installed as part of the requirements of this chapter or other city requirement must be maintained in a healthy, growing condition at all times. The property owner is responsible for regular weeding, mowing of grass, irrigating, fertilizing, pruning and other maintenance of all plantings, including parkways, as needed. Any plant or tree which is planted as a result of the requirements of this chapter, or for which the owner is credited or awarded points under this chapter, and that dies, must be replaced immediately with another plant or tree so as to maintain compliance with this chapter and the approved landscape plan.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-5. Plant material requirements.

- (a) *Approved plant species list.* The following list of plant material may be utilized to satisfy the requirements of this chapter to tree plantings and for buffer yard plantings. Shrubs, perennials, ground cover, vines and grasses may be planted to satisfy the requirements of this chapter provided that they are not on the prohibited plant list and are suitable for the climate conditions in this region and the micro-climate situations that exist on site. Additional plant materials may be approved to satisfy required plantings at the discretion of the landscape administrator.

Large Trees

TABLE INSET:

Common Name	Scientific Name
Afghan Pine	<i>Pinus eldarica</i>
Austrian Pine	<i>Pinus nigra</i>
Bald Cypress	<i>Taxodium distichum</i>
Bigtooth Maple	<i>Acer grandidentatum</i>
Blackjack Oak	<i>Quercus marilandica</i>
Bur Oak	<i>Quercus macrocarpa</i>
Caddo Maple	<i>Acer barbatum</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>
Durand Oak	<i>Quercus sinuate</i>

Eastern Red Cedar	<i>Juniperus virginiana</i>
Ginkgo	<i>Ginkgo biloba</i>
Japanese Black Pine	<i>Pinus thunbergii</i>
Lacebark Elm	<i>Ulmus parvifolia sempervirens</i>
Live Oak	<i>Quercus virginiana</i>
Loblolly Pine	<i>Pinus Taeda</i>
Pecan	<i>Carya illnoinensis</i>
Post Oak	<i>Quercus stellata</i>
Red Maple	<i>Acer rubrum</i>
Shumard Oak	<i>Quercus shumardii</i>
Texas Ash	<i>Fraxinus texensis</i>
Texas Red Oak	<i>Quercus texana</i>
Trident Maple	<i>Acer buergerianum</i>
Western Soapberry	<i>Sapindus drummondii</i>

Small Understory and Ornamental Trees

TABLE INSET:

Common Name	Botanical Name
Aristocrat Pear	<i>Pyrus calleryana</i>
Crape Myrtle	<i>Lagerstroemia</i>
Desert Willow	<i>Chilopsis linearis</i>
Eves Necklace	<i>Sphora affinis</i>
Foster Holly	<i>Ilex x attenuata</i>
Goldenrain Tree	<i>Koelreuteria paniculata</i>
Japanese Maple	<i>Acer palmatum</i>
Lacey Oak	<i>Quercus glaucoides</i>
Mexican Buckeye	<i>Ungnadia speciosa</i>
Mexican Plum	<i>Prunus mexicana</i>
Mountain Cedar	<i>Juniperus ashei</i>
Nellie R. Stevens	<i>Ilex x 'NRS'</i>
Possumhaw Holly	<i>Ilex deciduas</i>
Mexican Redbud	<i>Cercis mexicana</i>
Rusty Blackhaw Viburnm	<i>Viburnam rufidulum</i>
Saucer Magnolia	<i>Magnolia soulangiana</i>
Savannah Holly	<i>Ilex opaca</i>
Sweetgum	<i>Liquidambar styrdciflua</i>

Texas Redbud	<i>Cercis texensis</i>
Texas Persimmon	<i>Diospyros texana</i>
Washington Hawthorn	<i>Crataegus phaenopyrum</i>
Wax Myrtle	<i>Myrica cerifera</i>
Yaupon Holly	<i>Ilex vomitoria</i>

Buffer yard and Screen Shrub List

TABLE INSET:

Common Name	Botanical Name
Afghan Pine	<i>Pinus eldarica</i>
Austrian Pine	<i>Pinus nigra</i>
Burford Holly	<i>Ilex cornuta 'Burfordii'</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Eleagnus	<i>Elaeagnus macrophylla</i>
Foster Holly	<i>Ilex x attenuata</i>
Mountain Cedar	<i>Juniperus ashei</i>
Nandina	<i>Nandina domestica</i>
Nellie R. Stevens	<i>Ilex x 'NRS'</i>
Savannah Holly	<i>Ilex opaca</i>
Yaupon Holly	<i>Ilex vomitoria</i>
Wax Myrtle	<i>Myrica cerifera</i>

- (b) *Prohibited plant species list.* The following list of plant materials will not count towards required plantings nor may they be utilized as alternate landscape requirement plantings. Their use in additional plantings over and above the city requirements is not, however, regulated or prohibited.

Trees

TABLE INSET:

Common Name	Scientific Name
Arizona Ash	<i>Fraxinus velutina "Arizonia"</i>
Bois D'arc	<i>Maclura pomifera</i>
Box Elder	
Cottonwood	<i>Populus deltoides</i>
Hackberry	<i>Celtis occidentalis</i>

Siberian Elm	<i>Ulmus pumila</i>
Silver Maple	<i>Acer saccharinum</i>
Sycamore	<i>Plantanus occidentalis</i>
Mimosa	<i>Albizzia julibrissen</i>
Mulberry	<i>Morus alba</i>
Lombardy Poplar	<i>Populus nigra italica</i>
Chinese Tallow	<i>Sapium sebiferum</i>
Arborvitae	<i>Thuja occidentalis</i>
Weeping Willow	<i>Salix babylonica</i>
Purple Plum	

Shrubs

TABLE INSET:

Common Name	Scientific Name
Euonymus	<i>Euonymus japonicus</i>
Ligustrum	<i>Ligustrum japonicum</i>
Pittosporum	<i>Pittosporum tobira</i>
Loquat	<i>Eriobotrya japonica</i>
Oleander	<i>Nerium oleander</i>
Cleyera	<i>Ternstroemia gymnanthera</i>

- (c) *Plant material size standards.* All plant materials shall be nursery grown or field collected, and shall conform to the standards set forth by the following:
- (1) American Joint Committee of Horticultural Nomenclature - Standardized Plant Names, Second Edition, 1942; or
 - (2) American Association of Nurserymen: American Standard of Nursery Stock, 1973.
- (d) *Plant material spacing standards.*
- (1) Shade trees shall be spaced between 12 feet and 60 feet on center.
 - (2) Ornamental trees shall be spaced between five feet and 30 feet on center.
 - (3) Screening shrubs shall be spaced between 30 inches and 60 inches on center.

- (4) All other plant materials shall be spaced based on normal and customary spacing standards for the landscape and nursery industry to provide 100 percent coverage of mass plantings within 24 months of the planting date.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-6. Alternate landscape requirements.

- (a) *Purpose and limitations.* This section is included to permit the use of certain optional items that can be utilized to foster flexibility and variety in compliant landscape designs, and obtain credits or reductions in some of the other requirements of this chapter, to the extent expressly authorized in this section.
- (b) *Base line square footage requirement.* The required landscape setback provided in section 48-4 may be reduced as allowed herein, subject to the limitations contained in this section or in section 48-4, provided the owner meets the "base line square footage requirement". The "base line square footage requirement" means the depth of the minimum landscape setback as provided in section 48-4 above, multiplied by the total linear footage of ROW frontage, with adjustments for any credits provided in this section for installation of one or more of the items from the list of alternate landscape requirements listed in this section. Reduction credits shall be allowed only for items installed over and above the standard landscape requirements provided in this chapter. Any and all combinations of alternate landscape requirements items may be utilized, subject to the limitations contained in this section and in section 48-4.
- (c) *Alternate landscape requirement selection list.*
 - (1) *Additional street tree plantings.*
 - a. A 100 square foot reduction from the base line square footage requirement may be earned for each additional three-inch caliper shade tree planted within 30 feet of a public street ROW that abuts the property.
 - b. A 25 square foot reduction from the base line square footage requirement may be earned for each additional ornamental tree of at least five feet in height planted within 30 feet of a public street ROW that abuts the property.
 - (2) *Additional site tree plantings.*
 - a. A 75 square foot reduction from the base line square footage requirements may be earned for planting each additional three-inch caliper shade tree planted more than 30 feet from the a public street ROW that abuts the property, but which is visible from the ROW.

- b. A 25 square foot reduction from the base line square footage requirement may be earned for planting each additional ornamental tree of more than five feet in height planted more than 30 feet from a public street ROW that abuts the property, but which is visible from the ROW.
- (3) *Additional screen shrub plantings.* A ten square feet reduction from the base line square footage requirements may be earned for each additional five-gallon evergreen screen shrub planted in a required buffer yard.
- (4) *Additional planting beds.* A two square feet reduction from the base line square footage requirement may be earned for each square foot of planting bed 100 percent planted with healthy plants which are either on the approved species list provided in subsection 48-5(a) or are approved by the landscape administrator, visible from the public ROW. These beds may contain any combination of shrubs, groundcovers, perennials or annuals.
- (5) *Existing tree preservation.* A credit may be earned for trees that are existing on site prior to development as provided herein:
- a. *Eligibility for credit reduction.* In order for an existing tree to qualify for a credit, the tree must meet all of the following criteria:
1. Must have an eight-inch caliper or larger;
 2. Must be in good health as determined by the landscape administrator and in form acceptable to the landscape administrator; and
 3. Must be one of the following species:

Shade Trees

TABLE INSET:

Common Name	Scientific Name
American Elm	<i>Ulmus americana</i>
Bald Cypress	<i>Taxodium distichum</i>
Bigelow Oak	<i>Quercus sinuata</i>
Black Hickory	<i>Carya texana</i>
Black Oak	<i>Quercus velutina</i>
Black Walnut	<i>Juglans nigra</i>
Blackjack Oak	<i>Quercus marilandica</i>
Bur Oak	<i>Quercus macrocarpa</i>
Cedar Elm	<i>Ulmus crassifolia</i>

Chinquapin Oak	<i>Quercus muehlenbergi</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Eve's Necklace	<i>Sophora affinis</i>
Green Ash	<i>Fraxinus pennsylvanica</i>
Gum Bumelia	<i>Bumelia lanuginosa</i>
Lacy Oak	<i>Quercus glaucoides</i>
Live Oak	<i>Quercus fusiformis</i>
Mesquite	<i>Prosopis glandulosa</i>
Pecan	<i>Carya Illinoensis</i>
Post Oak	<i>Quercus stellata</i>
Red Mulberry	<i>Morus rubra</i>
Rusty Blackhaw	<i>Viburnum rufidulum</i>
Shumard Red Oak	<i>Quercus shumardi</i>
Texas Ash	<i>Fraxinus texensis</i>
Texas Oak	<i>Quercus texana</i>
Texas Walnut	<i>Juglans microcarpa</i>
Western Soapberry	<i>Sapindus drummondi</i>
White Ash	<i>Fraxinus americana</i>
Winged Elm	<i>Ulmus alata</i>

4. A minimum of 75 percent of the critical root zone area shall be maintained in an undisturbed and natural condition;
5. Site grading operations shall not create a pooling of water within the critical root zone; and
6. For any existing tree being claimed for a preservation credit reduction, the following protective measures shall be taken prior to the commencement of other on-site construction activities:
 - (i) Tree flagging: All trees to be preserved shall be flagged by the developer with brightly colored vinyl tape wrapped around the main trunk at a height of approximately four feet or more above grade such that the tape is visible to workers on foot or driving equipment.
 - (ii) Protective fencing: All preserved trees remaining on-site shall have protective fencing, installed at the expense of the developer, located approximately at the tree's drip line. The protective fencing may be comprised of brightly colored vinyl construction fencing, chain link fencing or other similar fencing approximately four feet in height. In instances where the landscape administrator determines protective

fencing is not practical, the trunk of the preserved tree shall be protected by enclosing the entire circumference with lumber encircled with wire or other stabilizing means which does not damage the tree.

- b. *Credit reduction.* Assuming the above-listed criteria is met, for each existing tree saved, credit will be awarded as follows:
 1. One hundred twenty-five square feet may be reduced from the base line square footage requirement for each one-inch of caliper of an existing eligible tree;
 2. In addition, if the entire trunk of an eligible existing tree is located inside of a required buffer yard, credit may be awarded for a required buffer yard tree, but only on a one tree to one tree basis, regardless of the size of the existing tree.
- (6) *Native tree and shrub planting selections.* In order to encourage the use of native materials, credit shall be awarded for planting Texas Native plant materials as listed in the current issue of the *Texas Native Tree and Plant Directory* produced by the Texas Department of Agriculture. The credit awarded under this subsection is in addition to any other credits allowed in this section. The credit awarded shall be as follows:
 - a. A reduction of 50 square foot from the base line square footage requirements for each three-inch caliper Native Shade Tree planted;
 - b. A reduction of 50 square foot from the base line square footage requirements for each Native Ornamental Tree of at least five feet in height planted;
 - c. A reduction of ten square foot from the base line square footage requirements for each native plant of at least five gallons in size planted; and
 - d. A reduction of two square foot from the base line square footage requirements for each native plant of at least one gallon but less than five-gallon in size planted.
- (7) *Automated drip irrigation system.* Credit shall be awarded for installing an automated irrigation system that utilizes 100 percent drip technology for 100 percent of the required green space on the property. A reduction of one square foot from the base line square footage requirements shall be awarded for each square foot of planting area receiving drip irrigation.
- (8) *Specialty paving requirements.* Credit shall be awarded for installing accent or specialty paving as part of the overall vehicular and pedestrian access

system. A reduction of one square foot from the base line square footage requirements will be awarded for the total square footage of any of the following specialty paving, alone or in combination, installed on the property:

- a. Decorative concrete pavers;
- b. Grass crete pavers;
- c. Colored concrete; or
- d. Patterned concrete.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-7. Irrigation requirements.

- (a) *Installation requirements and standards.* All plantings required by this chapter shall be irrigated with an underground automated irrigation system, provided that hose bibs may be used in landscape areas not required by this chapter or on commercial developments whose total lot area is one-half acre or less in size, and placed so that any portion of the landscaped area can be reached with a 50-foot hose. Each irrigation system required hereunder shall conform to all standards and regulations set forth in this chapter and any other standards and regulations established by the City of Richland Hills, the TCEQ (Texas Commission on Environmental Quality) and the current National Plumbing Code, and shall also meet the following requirements and standards:
 - (1) The system shall be capable of providing the proper amount of water for the particular type of plant material used;
 - (2) The system shall be equipped with a rain sensor switch and a freeze sensor switch set at 38°F each capable of disabling the system until favorable conditions for operation exist; and
 - (3) Areas of open space which contain preserved trees, need not be irrigated if the landscape administrator determines irrigation would be harmful to the preserved trees.
- (b) *Maintenance requirements.* Irrigation systems installed, as part of the requirements of the landscape standards must be maintained in working condition at all times. The property owner is responsible for regular monitoring, adjustment and other maintenance of the system as needed to insure proper operation. Any component or piece of equipment which is installed as a result of the requirements of this chapter that is damaged or not functioning within normal parameters must

be adjusted, repaired or replaced immediately with a component that complies with the approved landscape plan.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-8. Restrictions against impairing visibility.

- (a) *Prohibition against obstructing visibility of traffic.* It shall be unlawful for any person to plant or allow on any property under his control any hedge, tree, shrub or other growth or any fence or wall or other structure in such a manner or at such location as to constitute an obstruction to view creating a traffic hazard. Nothing in this chapter shall be construed as permitting any obstruction to view which may constitute a traffic hazard.
- (b) *Visibility triangles.* Visibility triangles shall be accommodated in all site designs based on the following criteria:
 - (1) *Intersection of two streets.* Two visibility triangles shall be accommodated and created at each corner of the intersection of two public streets or the intersection of a private street and a public street. One leg of each such triangle shall begin at the property corner abutting the intersection ROW and continue 60 feet along the property line abutting one street ROW, and the other leg of each triangle shall begin at the property corner abutting the intersection ROW and continue seven feet along the property line abutting the other street ROW.
 - (2) *Intersection of public street and private drive.* A visibility triangle shall be accommodated and created at each corner of the intersection of a public street and a private drive. One leg of such triangle shall begin at the property corner abutting the intersection ROW and continue 60 feet along the property line abutting the street ROW, and the other leg of each triangle shall begin at the property corner abutting the intersection and continue seven feet along the line abutting the private drive.

It shall be unlawful to set out, maintain or permit or cause to be set out or maintained any tree, shrub, plant, sign, soil, fence, retainer wall or other view obstruction having a height greater than two feet as measured from the top of the curb of the abutting streets within any visibility triangle. (This restriction shall not apply to permanent buildings authorized by the city's comprehensive zoning ordinance, or to traffic control signs, traffic controller cabinets, traffic control hardware and equipment, traffic control fixtures, street signs, traffic control signals, fire hydrants, utility poles and any other utility-related equipment placed within such area by authority of the city council.)

- (c) *Height restriction in parkways.* It shall be unlawful to set out, maintain or permit or cause to be set out or maintained any tree, shrub, plant, soil, fence, retainer wall or other view obstruction within any parkway area which exceeds two feet in height above curb level.
- (d) *Exceptions.* The prohibitions contained in this section shall not apply to existing trees which are greater than 12 inches in caliper within a parkway area or a visibility triangle when such trees are trimmed at all times so that no branch or growth is less than ten feet above any portion of a city street and seven feet above curb level at all other points.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-9. Certification of completion.

- (a) *Compliance necessary for certificate of occupancy.* A certificate of occupancy will not be issued until the applicant presents to the city a written certification that the landscaping and irrigation systems indicated on the approved landscape plan are complete and operational, provided that a conditional certificate of occupancy may be issued without such written certification if an extension of time has been granted by the landscape administrator as provided in this chapter. a On any lot or tract equal to or greater than one-half-acre in size, such written certification must be prepared and signed by a landscape architect licensed by the State of Texas, and must contain the architect's official State of Texas Seal. On any lot or tract less than one-half-acre in size, such written certification must be prepared and signed by the applicant or the applicant's duly authorized representative.
- (b) *Substitutions and alterations from approved plans.* On any lot or tract equal to or greater than one-half-acre in size, any field substitutions or alterations from the approved plans shall be described or graphically indicated in this certification or on attachments, and shall be accompanied by a written statement that in the official opinion of the landscape architect, "the changes described maintain the compliance standards of the original approved plan." On any lot or tract less than one-half-acre in size, any field substitutions or alterations from the approved plans shall be made only with the written permission of the landscape administrator, and shall be described or graphically indicated in this certification or on attachments, and shall be accompanied by a written statement that in the applicant's opinion, "the changes described maintain the compliance standards of the original approved plan."
- (c) *Extensions of time.* If the applicant files a written request for an extension of time, and executes an agreement to complete the landscaping and irrigation systems indicated on the approved landscape plan within the extended time period, and an acknowledgment that if a conditional certificate of occupancy is issued, it may be revoked upon a failure to complete such required improvements,

the landscape administrator, with approval of the building official, may grant one extension of up to three months for weather or seasonal conditions that, in the judgment of the landscape administrator, warrant a delay of the completion of the approved landscape plan. This request shall include a written statement that the delay is warranted for weather or seasonal conditions. The request for extension shall be signed by the applicant, and shall also be signed by the landscape architect if one is required pursuant to this section or if one is utilized, even if not required.

(Ord. No. 957-03, § 5, 5-13-2003)

Sec. 48-10. Plan submittal requirements.

(a) *Landscape plan requirements.* Each applicant must submit a landscape plan that verifies compliance with this chapter and that meets the following requirements:

- (1) The landscape plan must be prepared by a landscape architect holding a current license in the state of Texas for any lot or tract which is equal to or greater than one-half-acre in size;
- (2) Tabulation charts shall be included to quantify the requirements and document how the candidate is proposing to meet the requirements of this chapter; (Refer to Tables #2 through #6 for sample tabulation charts.)
- (3) The applicant must furnish six copies of blue line or backline prints;
- (4) The plan must have a scale of one inch equals 30 feet or larger (*i.e.*, one inch equals 20 feet, one inch equals ten feet, etc.) and be on a standard drawing sheet of a size not to exceed 24 by 36 inches. Any plan, which cannot be drawn in its entirety on a 24 by 36-inch sheet must be drawn with appropriate match lines on two or more sheets;
- (5) The landscape plan must include the following information:
 - a. Names, addresses and telephone numbers of both the property owner and the person preparing the plan;
 - b. Project name, street address, and lot and block description;
 - c. Date of preparation, scale, and north arrow;
 - d. Sheet title;
 - e. Location of existing boundary lines and dimensions of the lot;

- f. Zoning district of the lot, and the zoning district of adjacent properties;
 - g. A vicinity map shall be attached to or made a part of the plan;
 - h. Approximate centerlines of existing water courses, the location of the floodway, and the location of existing and proposed streets and alleys, utility easements, driveways, and sidewalks on or abutting the lot;
 - i. All existing site improvements, including but not limited to buildings, paving, walls, and fencing;
 - j. All proposed site improvements, including but not limited to buildings, paving, walls, and fencing;
 - k. Location, height and material of proposed screening and fencing, with berms to be delineated by one foot contours at a maximum 3/1 slope horizontal over vertical;
 - l. Locations, dimensions and designation of proposed landscape setbacks and transitional buffers;
 - m. Complete description of plant materials shown on the plan, including names (common and scientific), locations, quantities, container or caliper sizes, heights, spread and spacing at installation;
 - n. All existing trees that are to be maintained on the property with notations listing species and size, in caliper inches;
 - o. A description of how existing healthy trees proposed to be retained will be protected from damage during construction;
 - p. Parking layout and number of parking spaces provided;
 - q. A description of proposed watering methods;
 - r. Plant list;
 - s. Location and dimensions of visibility triangles on the lot;
 - t. Certification that the plan meets the requirements of the landscape standards, signed by the applicant, and signed and sealed by the landscape architect by the landscape architect if one is required pursuant to this section; and
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u. Tabulation charts (sample charts below).

Required Landscape Tabulations

TABLE INSET:

Length of ROW	Required Landscape Setback	Base Line Square Footage Requirement
200 linear feet	30 feet	6,000 square feet
Required trees	Trees provided	
4	4	
Required shrubs	Shrubs provided	
40	40	

Parking Lot Landscape Tabulations

TABLE INSET:

Total Parking Spaces	Requirement: 1 island per 20 spaces	Islands Required	Islands Provided
3	3		
Trees required	Trees provided		
3	3		

Buffer yard Tabulations

TABLE INSET:

Subject Property Zoning	Adjacent Property Zoning	Length of Common Property Line	Required Buffer yard Level	Buffer yard #
I	300 feet	None		
C	180 feet	A	1	
R	300 feet	C	2	

TABLE INSET:

Buffer yard #	Total Length	Required Width	Total Square	# of Required Trees @ 1 tree	Screen Fence	Evergreen Screen
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			Footage of Buffer yard	per 300 SF		Hedge
1	180	10	1,800	6	No	No
2	300	30	9,000	30	Yes	Yes
Total quantity of required buffer yard trees				36		
Total quantity of provided buffer yard trees				36		

Alternate Landscape Requirement Tabulations

Additional Street Trees

TABLE INSET:

Quantity	Type	Unit Credit	Credit
3	Shade trees	100 sf/tree	300
5	Ornamental trees	25 sf/tree	125
Total square foot area credit			425

Additional Site Trees

TABLE INSET:

Quantity	Type	Unit Credit	Credit
3	Shade trees	75 sf/tree	225
2	Ornamental trees	25 sf/tree	50
Total square foot area credit			275

Additional Screen Shrubs

TABLE INSET:

Quantity	Type	Unit Credit	Credit
12	Dumpster screen hedge	10 sf/shrub	120
40	Loading dock screen hedge	10 sf/shrub	400
Total square foot area credit			520

Additional Planting Beds

TABLE INSET:

SF/Area	Location	Unit Credit	Credit
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110	Dumpster screen hedge	2 sf/sf	220
500	Entry beds	2 sf/sf	1,000
380	Loading dock screen hedge	2 sf/sf	760
Total square foot area credit			1,980

Existing Tree Preservation

TABLE INSET:

Quantity	Caliper Inch	Species	Unit Credit	Credit
1	12	Cedar elm	125 sf/cal"	1,500
2	8	Post oak	125 sf/cal"	2,000
1	10	Post oak	125 sf/cal"	1,250
Total square foot area credit			4,750	

Native Tree and Shrub Planting Selections

TABLE INSET:

Quantity	Type	Unit Credit	Credit
13	Shade trees	50 sf/tree	650
5	Ornamental trees	50 sf/tree	250
72	5 gal. shrub	10 sf/tree	720
25	1 gal. shrub	2 sf/tree	50
Total square foot area credit			1,670
Total alternate landscape square foot area credit			9,620

Square Footage Area Recap

TABLE INSET:

Base line square footage requirement	6,000 sf
Total alternate landscape credit	9,620 sf
Difference	-3,620 sf
Total required area of landscape setback	2,000 sf

(NOTE: In this situation the total alternate landscape credit exceeds the base line square footage requirement; therefore, the minimum amount of landscape setback

would be the calculated area of the total linear footage of the ROW multiplied by the minimum ten-foot depth, which in this case would be 2,000 SF.)

- (6) *Irrigation plan requirements.* Each applicant must submit an irrigation plan that verifies compliance with this chapter and that meets the following requirements:
- a. The irrigation plan must be prepared by a landscape architect or an irrigator holding a current license in the state of Texas;
 - b. The irrigation plan must contain the following information:
 1. Names, addresses and telephone numbers of both the property owner and the person preparing the plan;
 2. Project name, street address, and lot and block description;
 3. Date, scale, and north arrow;
 4. Location of existing boundary lines and dimensions of the lot;
 5. All existing and proposed site improvements, including but not limited to buildings, paving, walls, and fencing;
 6. Location and size of all control valves;
 7. Location and size of all irrigation heads;
 8. Location and size of all main line piping;
 9. Location and size of all lateral line piping;
 10. Location of all control wiring;
 11. Zone chart;
 12. Zone designations;
 13. Location and size of the water meter;
 14. Location and size of the back flow prevention device; and
 15. Installation and maintenance notes.

In-lieu-of submitting a full irrigation plan, a performance specification may be submitted clearly stating the intent of the system that will be installed, but such specification must still be prepared by a landscape architect or an irrigator holding a current license in the state of Texas. If using this option, the following information shall be included and graphically indicated on the landscape plan:

1. Water meter;
2. Double check valve;
3. Controller;
4. Rain sensor; and
5. Freeze sensor.

(Ord. No. 957-03, § 5, 5-13-2003)